

# Colorado Department of Public Health and Environment

# **OPERATING PERMIT**

Colorado Power Partners

First Issued: July 1, 2002

Renewed: January 1, 2009

Last Revised: October 5, 2011

# AIR POLLUTION CONTROL DIVISION COLORADO OPERATING PERMIT

FACILITY NAME: Colorado Power OPERATING PERMIT NUMBER

Partners (CPP)

FACILITY ID: 0870027

RENEWED: January 1, 2009 EXPIRATION DATE: January 1, 2014

MODIFICATIONS: See Appendix F of Permit

Issued in accordance with the provisions of Colorado Air Pollution Prevention and Control Act, 25-7-101 et seq. and applicable rules and regulations.

960PMR171

ISSUED TO: PLANT SITE LOCATION:

Colorado Power Partners 1500 S. Clayton Street 2575 Park Lane, Suite 200 Brush, Colorado 80723

Lafayette, CO 80026 Morgan County

#### INFORMATION RELIED UPON

Operating Permit Renewal Application

Received: June 19, 2006

And Additional Information Received: March 27 and June 28, 2006, December 5, 2007 and May 14,

2008

Nature of Business: Electrical Power Cogeneration

Primary SIC: 4911

RESPONSIBLE OFFICIAL FACILITY CONTACT PERSON

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SUBMITTAL DEADLINES

Semi-Annual Monitoring Period: January 1 – June 30, July 1 – December 31

Semi-Annual Monitoring Report: Due on August 1, 2009 & February 1, 2010 & subsequent years

Annual Compliance Period: January 1 to December 31

Annual Compliance Certification: Due on February 1, 2010 & subsequent years

Note that the Semi-Annual Monitoring Reports and Annual Compliance Certifications must be received at the Division office by 5:00 p.m. on the due date. Postmarked dates will not be accepted for the purposes of determining the timely receipt of those reports/certifications.

FOR ACID RAIN SUBMITTAL DEADLINES SEE SECTION III.4 OF THIS PERMIT

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## **SECTION I - General Activities and Summary**

#### 1. Permitted Activities

This facility consists of a cogeneration facility defined under Standard Industrial Classification 4911. Two combustion turbines, one of which is equipped with a heat recovery steam generator (HRSG) and duct burner produce electricity for sale. The combustion turbines are equipped with enhanced water/steam injection pollution control systems to reduce NO<sub>X</sub> emissions. One turbine is run in simple cycle mode (Brush 3) while the other is run in combined cycle mode (Brush 1). Each turbine serves a generator with a nameplate capacity of 28.5 MW. The waste heat from Brush 1 flows through a HRSG (equipped with a duct burner to provide additional heat) to generate steam, which is used to drive a steam turbine (30 MW) to generate additional electricity. There are also two diesel-fired internal combustion engines that are used to start the turbines. There is also a cooling tower to cool water for the steam turbine. Note that the combustion turbines are referred to as Brush 1 or GT-1 (combined cycle) and Brush 3 or GT-2 (simple cycle).

In the past, waste heat from the HRSG also provided thermal energy to heat a local greenhouse complex. When waste heat from the HRSG was not available or inadequate to meet the demand, auxiliary boilers were used to provide heat to the greenhouse. Previously three of the auxiliary boilers were addressed in this permit. However, in August 2007, the auxiliary boilers were bought by a third party and a separate operating permit was issued for the greenhouse. In December 2009, the new greenhouse owner submitted a permit application requesting that the greenhouse be considered a separate source from the Brush Cogeneration Facility and that a construction permit be issued for the auxiliary boilers. The Division agreed that the greenhouse was considered a separate source from the Brush Cogeneration Facility.

The facility is located in a 90 acre industrial area shared with the greenhouse complex and is just south of Brush. The area in which the plant operates is designated as attainment for all criteria pollutants.

There are no affected states within 50 miles of the plant and there are no Federal Class I designated areas within 100 kilometers of the plant.

- 1.2 Until such time as this permit expires or is modified or revoked, the permittee is allowed to discharge air pollutants from this facility in accordance with the requirements, limitations, and conditions of this permit.
- 1.3 This Operating Permit incorporates the applicable requirements contained in the underlying construction permits, and does not affect those applicable requirements, except as modified during review of the application or as modified subsequent to permit issuance using the modification procedures found in Regulation No. 3, Part C. These Part C procedures meet all applicable substantive New Source Review requirements of Part B. Any revisions made using the provisions of Regulation No. 3, Part C shall become new applicable requirements for

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purposes of this operating permit and shall survive reissuance. This permit incorporates the applicable requirements (except as noted in Section II) from the following construction permit: 91MR933 (excluding the boiler requirements), initial approval, modification 4, dated October 26, 1999.

- All conditions in this permit are enforceable by US Environmental Protection Agency, Colorado Air Pollution Control Division (hereinafter Division) and its agents, and citizens unless otherwise specified. **State-only enforceable conditions are:** Permit Condition Number(s): Section II, Conditions 1.14 (opacity) and Section V Conditions 3.d, 3.g (last paragraph), 14 and 18 (as noted)
- 1.5 All information gathered pursuant to the requirements of this permit is subject to the Recordkeeping and Reporting requirements listed under Condition 22 of the General Conditions in Section V of this permit.

# 2. Alternative Operating Scenarios

- 2.1 The permittee shall be allowed to make the following changes to its method of operation without applying for a revision of this permit.
  - 2.1.1 No separate operating scenarios have been specified.

# 3. Prevention Of Significant Deterioration (PSD)

- 3.1 This source is located in an area designated attainment for all pollutants. It is a fossil fuel-fired steam electric plant of more than 250 million Btu per hour input and is categorized as a major stationary source (Potential to Emit ≥ 100 Tons/Year). Future modifications at this facility resulting in a significant net emissions increase (see Reg 3, Part D, Sections II.A.26 and 42) for any pollutant as listed in Regulation No. 3, Part D, Section II.A.42 or a modification which is major by itself will result in the application of the PSD review requirements.
- 3.2 The following Operating Permits are associated with this facility for purposes of determining applicability of Prevention of Significant Deterioration regulations: 96OPMR153 (Brush Cogeneration Partners, Brush 2) and 00OPMR224 (BIV Generation Company, LLC, Brush 4).

#### 4. Accidental Release Prevention Program (112(r))

4.1 Based on the information provided by the applicant, this facility is not subject to the provisions of the Accidental Release Prevention Program (section 112(r)) of the Federal Clean Air Act.

#### **5.** Compliance Assurance Monitoring (CAM)

5.1 The following emission points at this facility use a control device to achieve compliance with an emission limitation or standard to which they are subject and have pre-control emissions that exceed or are equivalent to the major source threshold. They are therefore subject to the

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provisions of the CAM program as set forth in 40 CFR Part 64, as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV:

The turbines are not subject to CAM since at the time the CAM plan was required the Title V permit specified a continuous compliance determination method (40 CFR Part 64 § 64.2(b)(1)(vi), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

# 6. Summary of Emission Units

6.1 The emissions units regulated by this permit are the following:

Facility Identifier	AIRS ID Number	Description	Startup Date	Pollution Control Device
GT-1	001	Brush 1: One Westinghouse 251AA Natural Gas Fired Combustion Turbine, Rated at 420 mmBtu/hr, SN: 17A-2142, Equipped with HRSG and One (1) Natural Gas Fired Duct Burner, Rated at 180 mmBtu/hr.	October 1990	Enhanced Steam/Water Injection
GT-2	002	Brush 3: One Westinghouse 251AA Natural Gas Fired Combustion Turbine, Each Rated at 420 mmBtu/hr, SN: 17A-2144.	April 1991	Enhanced Steam/Water Injection
	012	Two (2) Cummins BT171OP-635 Diesel Fired Reciprocating Starter Engines, Rated at 600 hp, SN's: 734137-3 and 735311-3.	October 1990 (Brush 1) April 1991 (Brush 3)	Uncontrolled
S006	S009	One (1) Ecodyne Cooling Tower, Two Cell Counter Flow, 25,000 gallons/min	1990	Drift Eliminators

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# **SECTION II - Specific Permit Terms**

1. GT-1 and GT-2 - Two Natural Gas Fired Turbines (420 mmBtu/hr each), One HRSG, One Natural Gas Supplemented Duct Burner (180 mmBtu/hr) and Two (2) Diesel Fuel Fired Internal Combustion Engine Used for Startup

#### Each Turbine is Equipped W/Enhanced Water/Steam Injection

Brush 1 operates in combined cycle mode only (turbine exhaust routed to HRSG with duct burner to provide further heat). Note that the unit can be operated with or without fuel fired in the duct burner.

Brush 3 operates in simple cycle mode only (turbine only)

# Unless Otherwise Specified Limits are for Turbines, Duct Burners and Starter Engines Combined

Parameter	Permit Condition	Limitations		Compliance Emission Factor	Monitoring		
	Number	Short Term	Long Term		Method	Interval	
BACT Requirements	1.1	N/A	N/A	N/A	See Condition 1.1.		
PM	1.2.	N/A	5.0 tons/yr	See Condition 1.2.	Recordkeeping and Calculation	Monthly	
			112 lbs/mmBtu 104 lbs/mmBtu		Fuel Restriction	Only Natural Gas is Used as Fuel	
$PM_{10}$		N/A	5.0 tons/yr	]	Recordkeeping	Monthly	
VOC		N/A	24.2 tons/yr		and Calculation		

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Parameter		Permit Condition	Limitations	Compliance Emission Factor	Monito	oring
		Number	Short Term Long Term		Method	Interval
SO <sub>2</sub> 1.3.		1.3. 3.4 tons/yr		Turbines: Brush 3 - CMS Brush 1 - 0.0006 Ibs/mmBtu Duct Burner: 0.0006 Ibs/mmBtu Engines: 39.7 Ibs/10 <sup>3</sup> gal	Continuous Monitoring System, Recordkeeping and Calculation	Continuously, Monthly
			for each turbine: 150 ppmvd @ 15% O <sub>2</sub> OR Use of Fuel Which Contains Less than 0.8 Weight % Sulfur	N/A	Fuel Restriction	See Condition 1.3.
			for each turbine: 0.35 lbs/mmBtu			
			for each starter engine: 0.8 lbs/mmBtu			
$NO_X$	Brush 1	1.4.	All limitations are on a 1-hr average  33 ppmvd @ 15% O <sub>2</sub> , expect as provided for below  During Startup, 40 ppmvd @ 15% O <sub>2</sub> and 88.4 lbs/hr  During Shutdown, 60 ppmvd @ 15% O <sub>2</sub> and 94.5 lbs/hr	N/A	Continuous Emission Monitor	Continuously
	Brush 3		All limitations are on a 1-hr average  25 ppmvd @ 15% O <sub>2</sub> , expect as provided for below  During Startup: 40 ppmvd @ 15% O <sub>2</sub> and 61.9 lbs/hr  During Shutdown: 60 ppmvd @ 15% O <sub>2</sub> and 92.8 lbs/hr			
	Both Turbines and Duct Burner Together		134 tons/yr			

		Permit Condition	Lim	itations	Compliance Emission Factor	Monito	oring
	Number		Short Term	Short Term Long Term		Method	Interval
СО	Brush 1	1.5.	All limitations are on a 1-hr average  60 ppmvd @ 15% O <sub>2</sub> , expect as provided for below  During Startup and Shutdown: 200 ppmvd @ 15% O <sub>2</sub> and 253.7 lbs/hr  All limitations are on a 1-hr average  60 ppmvd @ 15% O <sub>2</sub> , expect as provided for below  During Startup and Shutdown: 200 ppmvd @ 15% O <sub>2</sub> and 188.2 lbs/hr		N/A	Continuous Emission Monitor	Continuously
	Brush 3						
	Both Turbines and Duct Burner together		147.:	5 tons/yr			
Fuel Use	Natural Gas	1.6.	N/A	Turbines and Duct Burner: 2,240 mmSCF/yr	N/A	Fuel Meter	Duct Burner - Daily Turbines and
	No. 2 Fuel Oil			Starter Engines: 4,000 gal/yr			<b>Engines -</b> Monthly
Contin Emiss Monit Requi	ion	1.7.	N/A	N/A	N/A	See Condition 1.7.	
NSPS Recor	Burner - dkeeping rements	1.8.		of Annual Capacity actor	N/A	Monthly Monthly	
Sulfur Natura	Content of al Gas	1.9.	N/A	N/A	N/A	See Condition 1.9.	
Btu Co Natura	ontent of al Gas	1.10.	N/A	N/A	N/A	ASTM Methods or In-Line Gas Chromatograph-	Monthly
NSPS Provis	General sions	1.11.	N/A	NA	N/A	As required in the G	deneral Provisions
Opaci	ty	1.12.		d 20% Except as I for in 1.13	N/A	See Condition 1.12.	

Parameter	Permit Condition	Limitations	Compliance Emission Factor	Monitoring	
	Number	Short Term Long Term		Method	Interval
Opacity	1.13.	For Certain Operational Activities - Not to Exceed 30%, for a Period or Periods Aggregating More than Six (6) Minutes in any 60 Consecutive Minutes	N/A	See Condition 1.13.	
State-Only Opacity	1.14.	Not to Exceed 20%	N/A	See Condition 1.14.	
Acid Rain Requirements	1.15.	See Section III of this Permit		Certification	Annually

- 1.1 The **two combustion turbines and the duct burne**r are subject to the requirements of the Prevention of Significant Deterioration (PSD) Program.
  - 1.1.1 Best Available Control Technology (BACT) shall be applied for control of Nitrogen Oxides (NO<sub>X</sub>) and Carbon Monoxide (CO). BACT has been determined as follows:
    - 1.1.1.1 BACT for NO<sub>X</sub> has been determined to be further modification to the combustion systems, coupled with enhanced water injection for the combustion turbines and a low NO<sub>X</sub> combustion system for the duct burner with the emission limits as identified in Condition 1.4.1 (Colorado Construction Permit 91MR933, initial approval, modification 4, dated October 26, 1999).
    - 1.1.1.2 BACT for CO has been determined to be good combustion control, coupled with optimized water injection for the turbines and the duct burner with the emission limits as identified in Condition 1.5.1 (Colorado Construction Permit 91MR933, initial approval, modification 4, dated October 26, 1999).
- 1.2 PM, PM<sub>10</sub> and VOC emissions are subject to the following requirements:
  - 1.2.1 **Total** Emissions of PM, PM<sub>10</sub> and VOCs **from both turbines, both starter engines and the duct burner** shall not exceed the limitations stated above (Colorado Construction Permit 91MR933, initial approval, modification 4, dated October 26, 1999). Monthly emissions from each emission unit shall be calculated by the end of the subsequent month using the emission factors (EF) in the table below, the monthly fuel consumption (as determined by Condition 1.6) and for the turbines and duct burner the heat content of the natural gas (as determined by Condition 1.10) in the following equations:

# **Turbine, Duct Burner or Turbine/Duct Burner Combination:**

 $tons/month = \underbrace{(EF, lbs/mmBtu) \ x \ (Fuel \ Use, \ mmSCF/mo) \ x \ (heat \ content \ of \ fuel, \ mmBtu/mmSCF)}_{2000 \ lbs/ton}$ 

**Engines:** 

 $tons/month = \underbrace{(EF, lbs/10^3 \ gal) \ x \ (Fuel \ Use, \ 10^3 \ gal/mo)}_{2000 \ lbs/ton}$ 

Pollutant	Turbine and Duct Burner Emission Factors	Source of Emission Factor	Engine Emission Factors	Source of Emission Factor
PM	Brush 1 - 0.0055 lbs/mmBtu Brush 3 - 0.0062 lbs/mmBtu	December 21 & 22, 1999 Performance Test	42.5 lbs/10 <sup>3</sup> gal	AP-42, Section 3.3 (dated 10/96), Table 3.3-1, converted to lbs/10 <sup>3</sup> gal based on diesel heat content of 137,000 Btu/gal
PM <sub>10</sub>	Brush 1 - 0.0055 lbs/mmBtu Brush 3 - 0.0062 lbs/mmBtu		42.5 lbs/10 <sup>3</sup> gal	
$SO_2$	Brush 3 - CMS Brush 1 – 0.0006 lbs/mmBtu	Default Emission Factor from 40 CFR Part 75, Appendix D for Units Burning Pipeline Quality Natural Gas	39.7 lbs/10 <sup>3</sup> gal	
CO	CEM	N/A	130 lbs/10 <sup>3</sup> gal	
NO <sub>X</sub>	СЕМ	N/A	554.6 lbs/10 <sup>3</sup> gal	Manufacturer's Guarantee (g/hp- hr), converted to lbs/Mgal, based on 600 hp and 32.2 gal/hr
VOC	Turbines - 0.0021 lbs/mmBtu Duct Burner - 0.0054 lbs/mmBtu	AP-42, Sections 3.1 (dated 4/00), Table 3.1-2a for turbine and 1.4 (dated 3/98), Table 1.4-2, converted to lb/mmBtu based on a heat content of 1,020 Btu/SCF for duct burner.	18.4 lbs/10 <sup>3</sup> gal	

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Monthly emissions, from each emission unit shall be summed and used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

1.2.2 Particulate Matter (PM) emissions **from Brush 1 (turbine only) and Brush 3 (turbine/HRSG/duct burner combination)** shall not exceed the above limitations (Colorado Regulation No. 1, Section III.A.1). In the absence of credible evidence to the contrary, compliance with the particulate matter emission limits is presumed since only natural gas is permitted to be used as fuel in the turbines and the duct burner.

The numeric PM standards were determined as follows:

For Brush 3 (simple cycle operation - turbine only) using the design heat input for the turbine (420 mmBtu/hr) in the following equation:

$$PE = 0.5 \ x \ (FI)^{-0.26}$$
, where:  $PE = particulate \ standard \ in \ lbs/mmBtu$   $FI = fuel \ input \ in \ mmBtu/hr$ 

For Brush 1 (combined cycle operation – turbine/HRSG/duct burner), using the design heat input for the turbine (420 mmBtu/hr) and the duct burner (180 mmBtu/hr) in the following equation:

$$PE \text{ (combined cycle)} = \underbrace{PE_{T} \text{ x } FI_{T} + PE_{DB} \text{ x } FI_{DB}}_{FI_{T} + FI_{DB}}$$

Note that if Brush 3 is operated without fuel fired in the duct burner, the PM emission limitation is 0.104 lb/mmBtu, which is based on PE<sub>T</sub> only.

- 1.3 Sulfur Dioxide (SO<sub>2</sub>) emissions shall not exceed the following limitations:
  - 1.3.1 Total Sulfur Dioxide (SO<sub>2</sub>) emissions from both turbines, both starter engines and the duct burner shall not exceed the above limitations (Colorado Construction Permit 91MR933, initial approval, modification 4, dated October 26, 1999, as modified under the provisions of Section I, Condition 1.3). Monthly emissions from Brush 3 shall be determined using the continuous monitoring system required by 40 CFR Part 75 (Acid Rain Monitoring Requirements, Section III of this permit). Monthly emissions from Brush 1 (turbine/HRSG/duct burner) and the starter engines shall be calculated by the end of the subsequent month using the emission factors (EF) and equations identified in Condition 1.2.1, the monthly fuel consumption (as determined by Condition 1.6) and for the turbines and duct burner the heat content of the natural gas (as determined by Condition 1.10).. Monthly emissions, from the turbines, engines and duct burner shall be summed and used in a twelve month rolling total to monitor compliance with the annual limitation. Each month a new twelve month total shall be calculated using the previous twelve months data.

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- 1.3.2 Each turbine shall meet one of the following requirements:
  - 1.3.2.1 Sulfur Dioxide ( $SO_2$ ) emissions from each turbine shall not exceed 150 ppmvd at 15%  $O_2$ ,

#### OR

1.3.2.2 No fuel, which contains sulfur in excess of 0.8 percent by weight, shall be used in these combustion turbines (40 CFR Part 60 Subpart GG §§ 60.33(a) & (b), as adopted by reference in Colorado Regulation No. 6, Part A).

In the absence of credible evidence to the contrary, compliance with the above requirements is presumed since only pipeline quality natural gas is permitted to be used as fuel. The pipeline quality natural gas used as fuel shall meet the requirements in Condition 1.9.

- 1.3.3 Sulfur Dioxide (SO<sub>2</sub>) emissions **from each turbine** shall not exceed 0.35 lbs/mmBtu, on a 3-hr rolling average (Colorado Regulation No. 1, Section VI.B.4.c.(ii) and VI.B.2). In the absence of credible evidence to the contrary, compliance with the SO<sub>2</sub> limitations is presumed since only pipeline quality natural gas is permitted to be used as fuel in these turbines. The pipeline quality natural gas used as fuel shall meet the requirements in Condition 1.9.
- 1.3.4 Sulfur Dioxide (SO<sub>2</sub>) emissions **from each starter engine** shall not exceed 0.8 lbs/mmBtu (Colorado Regulation No. 1, Section VI.B.4.b.(i)). In the absence of credible evidence to the contrary, compliance with the SO<sub>2</sub> limitation is presumed, since only diesel fuel is permitted to be used as fuel.

Note that based on the emission factor identified in the above table, compliance with the  $SO_2$  emission limitation is achieved as long as the heat content of the diesel fuel is not less than 49,625 Btu/gal. Typically the heat content of diesel fuel is 140,000 Btu/gal.

- 1.4 Emissions of Nitrogen Oxides (NO<sub>X</sub>) shall not exceed the following limitations:
  - 1.4.1 BACT emission limits are as follows:
    - 1.4.1.1 Nitrogen Oxides (NO<sub>X</sub>) emissions **from Brush 1** (**combined cycle turbine/HRSG/duct burner**) shall not exceed the following limitations (Colorado Construction Permit 91MR933, initial approval, modification 4, dated October 26, 1999, as modified under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Sections I.A.7 and III.B.7 to include and subsequently revise alternate BACT limit for periods of startup and shutdown):

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- a. Except as provided for below, emissions of  $NO_X$  shall not exceed 33 ppmvd at 15%  $O_2$ , on a 1-hour average.
- b. During startup, emissions of  $NO_X$  shall not exceed 40 ppmvd at 15%  $O_2$  and 88.4 lbs/hr, both on a 1-hour average. In the event that emissions of  $NO_X$  exceed 40 ppmvd at 15%  $O_2$ , it shall be considered a violation of the  $NO_X$  BACT emissions limit if  $NO_X$  emissions exceed 88.4 lbs/hr and not a violation if emissions are less than or equal to 88.4 lbs/hr.
- c. During shutdown, emissions of  $NO_X$  shall not exceed 60 ppmvd at 15%  $O_2$  and 94.5 lbs/hr, both on a 1-hour average. In the event that emissions of  $NO_X$  exceed 40 ppmvd at 15%  $O_2$ , it shall be considered a violation of the  $NO_X$  BACT emissions limit if  $NO_X$  emissions exceed 94.5 lbs/hr and not a violation if emissions are less than or equal to 94.5 lbs/hr.
- d. Startup begins when fuel is injected into the gas turbine and ends when the gross plant generation (combined load from the gas turbine and the steam turbine generator) first reaches or exceeds 27 MW. Shutdown begins when the order to shutdown the unit is received and the gross plant generation is less than 27 MW and ends when the fuel control valve is closed.
- 1.4.1.2 Nitrogen Oxide (NO<sub>X</sub>) emissions **from Brush 3** (**simple cycle turbine only**) shall not exceed the following limitations (Colorado Construction Permit 91MR933, initial approval, modification 4, dated October 26, 1999, as modified under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Sections I.A.7 and III.B.7 to include and subsequently revise alternate BACT limit for periods of startup and shutdown):
  - a. Except as provided for below, emissions of  $NO_X$  shall not exceed 25 ppmvd at 15%  $O_2$ , on a 1-hour average.
  - b. During startup, emissions of NO<sub>X</sub> shall not exceed 40 ppmvd at 15% O<sub>2</sub> and 61.9 lbs/hr, both on a 1-hour average. In the event that emissions of NO<sub>X</sub> exceed 40 ppmvd at 15% O<sub>2</sub>, it shall be considered a violation of the NO<sub>X</sub> BACT emissions limit if NO<sub>X</sub> emissions exceed 61.9 lbs/hr and not a violation if emissions are less than or equal to 61.9 lbs/hr.
  - c. During shutdown, emissions of  $NO_X$  shall not exceed 60 ppmvd at 15%  $O_2$  and 92.8 lbs/hr, both on a 1-hour average. In the event that emissions of  $NO_X$  exceed 40 ppmvd at 15%  $O_2$ , it shall be considered a violation of the  $NO_X$  BACT emissions limit if  $NO_X$

- emissions exceed 92.8 lbs/hr and not a violation if emissions are less than or equal to 92.8 lbs/hr.
- d. Startup begins when fuel is injected into the gas turbine and ends when the gross power output from the gas turbine first reaches or exceeds 17.1 MW. Shutdown begins when the order to shutdown the unit is received and the gross power output from the gas turbine is less than 17.1 MW and ends when the fuel control valve is closed.

Compliance with the  $NO_X$  BACT limitations shall be monitored using the continuous emission monitor required by Condition 1.7. The emission limitations in Conditions 1.4.1.1.a and 1.4.1.2.a begin with the first full hour of operation after startup is complete and continue until the last full hour prior to shutdown.

- 1.4.2 **Total** emissions of NO<sub>X</sub> **from both turbines, both starter engines and the duct burner** shall not exceed the above limitations (Colorado Construction Permit 91MR933, initial approval, modification 4, dated October 26, 1999). Monthly emissions from the turbines and duct burner shall be determined using the continuous emission monitor required by Condition 1.7. Monthly emissions from the starter engines shall be calculated using the emission factor and equation identified in Condition 1.2.1 and the monthly fuel consumed in the engines as determined by Condition 1.6. Monthly emissions from the turbines, engines and duct burner shall be summed and a twelve month rolling total of emissions shall be maintained to monitor compliance with the annual emission limitation. Each month a new twelve month total shall be calculated using the previous twelve months total.
- 1.5 Emissions of Carbon Monoxide (CO) shall not exceed the following limitations:
  - 1.5.1 For purposes of BACT, Carbon Monoxide (CO) emissions **from either Brush 1** (combined cycle turbine/HRSG/duct burner) or Brush 3 (simple cycle turbine only) shall not exceed the following limitations (Colorado Construction Permit 91MR933, initial approval, modification 4, dated October 26, 1999, as modified under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Sections I.A.7 and III.B.7 to include and subsequently revise alternate BACT limit for periods of startup and shutdown):
    - 1.5.1.1 Except as provided for below, emissions of CO shall not exceed 60 ppmvd at 15% O<sub>2</sub>, on a 1-hour average.
    - 1.5.1.2 During periods of startup and shutdown, emissions of CO **from Brush 1** shall not exceed 200 ppmvd at 15% O<sub>2</sub> and 253.7 lbs/hr, both on a 1-hour average. In the event that emissions of CO exceed 200 ppmvd at 15% O<sub>2</sub>, it shall be considered a violation of the CO BACT emissions limit if CO emissions exceed 253.7 lbs/hr and not a violation if emissions are less than or equal to 253.7 lbs/hr.

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- 1.5.1.3 During periods of startup and shutdown, emissions of CO **from Brush 3** shall not exceed 200 ppmvd at 15% O<sub>2</sub> and 188.2 lbs/hr, both on a 1-hour average. In the event that emissions of CO exceed 200 ppmvd at 15% O<sub>2</sub>, it shall be considered a violation of the CO BACT emissions limit if CO emissions exceed 188.2 lbs/hr and not a violation if emissions are less than or equal to 188.2 lbs/hr.
- 1.5.1.4 Startup and shutdown for combined cycle operation (Brush 1) are defined in Condition 1.4.1.1.d.
- 1.5.1.5 Startup and shutdown for simple cycle operation (Brush 3) are defined in Condition 1.4.1.2.d.

Compliance with the CO BACT emission limitations shall be monitored using the continuous emission monitor required by Condition 1.7. The emission limitation in Condition 1.5.1.1 begins with the first full hour of operation after startup is complete and continues until the last full hour prior to shutdown.

- 1.5.2 Total emissions of CO from both turbines, both starter engines and the duct burner shall not exceed the above limitations (Colorado Construction Permit 91MR933, initial approval, modification 4, dated October 26, 1999). Monthly emissions from the turbines and duct burner shall be determined using the continuous emission monitor required by Condition 1.7. Monthly emissions from the starter engines shall be calculated using the emission factor and equation identified in Condition 1.2.1 and the monthly fuel consumed in the engines as determined by Condition 1.6. Monthly emissions from the turbines, engines and duct burner shall be summed and a twelve month rolling total of emissions shall be maintained to monitor compliance with the annual emission limitation. Each month a new twelve month total shall be calculated using the previous twelve months total.
- Natural gas consumption shall not exceed the above limitations (Colorado Construction Permit 91MR933, initial approval, modification 4, dated October 26, 1999, as modified under the provisions of Section I, Condition 1.3). Natural gas consumed by the turbines and diesel fuel consumed by the starter engines shall be monitored and recorded monthly using fuel meters and other records as necessary. Natural gas consumed by the duct burner shall be recorded daily, as required by 40 CFR Part 60 Subpart Db § 60.49b(d), as adopted by reference in Colorado Regulation No 6, Part A. Monthly quantities of natural gas consumed by the turbines and the duct burner shall be summed and used in a rolling twelve month total to monitor compliance with the annual limitation. Monthly quantities of diesel fuel consumed by the starter engines shall be used in a separate twelve month rolling total to monitor compliance with the annual limitation. Each month a new twelve month rolling total for fuel consumed in the turbines and duct burners and fuel consumed in the starter engines shall be calculated using the previous twelve months data.
- 1.7 Each of the exhaust stacks shall be equipped with a continuous emission monitoring system to measure and record the following:

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- 1.7.1 Concentration of Oxides of Nitrogen, ppmvd @ 15% O<sub>2</sub>, hourly average;
- 1.7.2 Emission rate of Oxides on Nitrogen, pounds per hour, tons per month;
- 1.7.3 Concentration of Carbon Monoxide, ppmvd @ 15% O<sub>2</sub>, hourly average;
- 1.7.4 Emission rate of Carbon Monoxide, pounds per hour, tons per month; and
- 1.7.5 Gross output, in MW.

The moisture content of exhaust gases and exhaust gas flow rate may be parametrically monitored. Procedure and accuracy shall conform to 40 CFR Part 75.

The continuous emission monitors shall meet the requirements in Section II, Condition 3 of this permit. Monthly emissions of  $NO_X$  and CO from the continuous emission monitoring system shall be used as specified by Conditions 1.4.2 and 1.5.2 to monitor compliance with the annual  $NO_X$  and CO emission limitations.

- Daily fuel consumption records (Condition 1.6) shall be used to calculate the annual capacity factor. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month (40 CFR Part 60 Subpart Db § 60.49b(d), as adopted by reference in Colorado Regulation No. 6, Part A).
- 1.9 The permittee shall maintain records demonstrating that the natural gas burned has a hydrogen sulfide (H<sub>2</sub>S) content less than 0.3 grains/100 SCF. The demonstration shall be made using any of the methods identified in 40 CFR Part 75 Appendix D, Section 2.3.1.4. These records shall be made available to the Division upon request.
- 1.10 The Btu content of natural gas used to fuel this equipment shall be determined monthly using the appropriate ASTM Methods or equivalent, if approved by the Division in advance. In lieu of collecting a sample, the Btu content of the natural gas may be determined using the in-line gas chromatograph to determine the gas composition and the appropriate GPA standard to calculate the Btu content. The Btu content shall be calculated using the average composition of the gas as determined by the in-line gas chromatograph for the month.

If sampling is conducted, calculation of monthly emissions outlined under Conditions 1.2.1 and 1.3.1 shall be based on the most recent required analysis. The Btu content shall be based on the saturated gross heating value (HHV) of the fuel.

If the gas chromatograph is used, calculation of monthly emissions outlined under Conditions 1.2.1 and 1.3.1 shall be based on the average Btu content for that month as determined by the gas chromatograph. The Btu content shall be based on the saturated gross heating value (HHV) of the fuel in accordance with the appropriate GPA method.

1.11 Regulation No. 6, Part A, Subpart A, General Provisions applies as follows:

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- 1.11.1 No article, machine, equipment or process shall be used to conceal an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gasses discharged to the atmosphere. (§ 60.12)
- 1.11.2 At all times, including periods of startup, shutdown, and malfunction, owners and operators shall to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source (Colorado Construction Permit 91MR933, initial approval, modification 4, dated October 26, 1999 and 40 CFR Subpart A § 60.11(d)).
- 1.12 Except as provided for in Condition 1.13 below, no owner or operator of a source shall allow or cause the emission into the atmosphere of any air pollutant which is in excess of 20% opacity (Colorado Construction Permit 91MR933, initial approval, modification 4, dated October 26, 1999 and Colorado Regulation No. 1, Section II.A.1). This opacity standard applies to each turbine, turbine/HRSG/duct burner combination and starter engine.

Compliance with this requirement shall be monitored as follows:

- 1.12.1 **For each turbine and/or turbine/HRSG/duct burner combination:** In the absence of credible evidence to the contrary, compliance with the 20% opacity limit shall be presumed since only natural gas is permitted to be used as fuel for these units.
- 1.12.2 **For each starter engine:** Continued operation of the engine after the completion of the startup period shall require at least one opacity observation for each calendar day of operation. If the startup and operation is for a period that lasts less than a total of 4 hours from engine start to engine stop, no opacity observations are required. All opacity observations shall be performed by an observer with current and valid Method 9 certification. Results of Method 9 readings and a copy of the certified Method 9 reader's certification shall be made available to the Division upon request.
- 1.13 No owner or operator of a source shall allow or cause to be emitted into the atmosphere any air pollutant resulting from the building of a new fire, cleaning of fire boxes, soot blowing, start-up, process modifications, or adjustment or occasional cleaning of control equipment which is in excess of 30% for a period or periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes (Colorado Construction Permit 91MR933, initial approval, modification 4, dated October 26, 1999 and Colorado Regulation No. 1, Section II.A.4). This opacity standard

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applies to each turbine, turbine/HRSG/duct burner combination and starter engine. Compliance with this requirement shall be monitored as follows:

- 1.13.1 **For each turbine and/or turbine/duct burner combination:** In the absence of credible evidence to the contrary, compliance with the 30% opacity limit shall be presumed since only natural gas is permitted to be used as fuel for these units.
- 1.13.2 **For each starter engine:** An engine startup period of less than 60 minutes shall not require a startup opacity observation. If the engine startup period is greater than 60 minutes, one opacity observation shall be made for each consecutive 4 hour period of startup during daylight hours. In addition, a record shall be kept of the date and time the engine started and when it was shutdown. All opacity observations shall be performed by an observer with current and valid Method 9 certification. Results of Method 9 readings and a copy of the certified Method 9 reader's certification shall be made available to the Division upon request.
- 1.14 **State-Only Requirement:** No owner or operator may discharge, or cause the discharge into the atmosphere of any particulate matter which is greater than 20% opacity (Colorado Regulation No. 6, Part B, Section II.C.3). This opacity standard applies to **each turbine and/or turbine/HRSG/duct burner combination**. In the absence of credible evidence to the contrary, compliance with the 20% opacity requirement is presumed since only natural gas is permitted to be used as fuel for these units.

Note that this opacity standard applies at all times except during periods of startup, shutdown and malfunction (40 CFR Part 60 Subpart A § 60.11(c), as adopted by reference in Colorado Regulation No. 6, Part B, Section I.A).

Note that this opacity requirement is more stringent than the opacity requirement in Condition 1.13 during periods of building of a new fire, cleaning of fire boxes, soot blowing, process modifications and adjustment or occasional cleaning of control equipment.

1.15 This unit is subject to the Title IV Acid Rain Requirements. As specified in 40 CFR Part 72.72(b)(1)(viii), the acid rain permit requirements shall be complete and segregable portion of the Operating Permit. As such the requirements are found in Section III of this permit.

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#### 2. S006 - Cooling Tower

Parameter	Permit Condition	Limitations		Compliance Emission Factor	Monitori	ng
	Number	Short Term	Long Term		Method	Interval
PM	2.1.	N/A	2.5 tons/yr	See Condition 3.1.	Recordkeeping	Monthly
$PM_{10}$			2.5 tons/yr		and Calculations	
Water Circulation	2.2.	N/A	6,000 MMgal/yr	N/A	Pump Run Time	Monthly
Total Solids Concentration	2.3.	N/A	N/A	N/A	Specific Conductivity Measurement	Monthly
Opacity	2.4.	Not to Exceed 20%		N/A	See Condition 2.4.	

2.1 PM and PM<sub>10</sub> emissions from the cooling tower shall not exceed the above limitations (as provided for under the provisions of Colorado Regulation No. 3, Part A, Section I.B.36.h and Part C, Section II.B.7, based on the APEN submitted on February 4, 1999). Monthly emissions shall be calculated by the end of the subsequent month using the following equation:

 $PM = PM_{10} \ (tons/month) = \underbrace{Q \ x \ d \ x \ \% \ drift \ x \ 31.3\% \ drift \ dispersed \ x \ total \ solids \ concentration}_{2000 \ lbs/ton}$ 

Where: Q = water circulated, gal/month

d = density of water, lbs/gal (from T5 application d = 8.34 lbs/gal)

% drift = 0.02%

31.3% drift dispersed (from EPA-600/7-79-251a, November 1979, "Effects of Pathogenic and Toxic

Materials Transported Via Cooling Device Drift - Volume1 - Technical Report", Page 63)

Total solids concentration = measured specific conductivity x 0.67 - to be determined by Condition 3.3.

A twelve month rolling total shall be maintained to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

2.2 The quantity of water circulated shall not exceed the above limitations (as provided for under the provisions of Colorado Regulation No. 3, Part A, Section I.B.36.h and Part C, Section II.B.7, based on the information submitted on February 4, 1999, indicating 4,000 hrs/yr of operation at a design rate of 25,000 gal/minute). The quantity of water circulated shall be determined each month by multiplying the hours of operation of each pump by the design flow rate of each pump as follows:

Water Circulation Rate = pump run time (hrs/yr) x Design Flow Rate (Gal/min) x 60 min/hr (*Note pump run time is based on steam turbine hours of operation*)

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- 2.3 Total solids concentration shall be determined monthly using the measured monthly specific conductivity multiplied by 0.67. The monthly total solids concentration shall be used to calculate monthly emissions as required by Condition 2.1. A copy of the procedures used to obtain the specific conductivity measurement shall be maintained and made available to the Division upon request.
- 2.4 No owner or operator of a source shall allow or cause the emission into the atmosphere of any air pollutant which is in excess of 20% opacity (Colorado Regulation No. 1, Section II.A.1). In the absence of credible evidence to the contrary, compliance with the opacity standard shall be presumed, provided the drift eliminators on the tower are maintained and operated in accordance with manufacturers' requirements and good engineering practices.
- 2.5 The cooling tower and associated drift eliminators shall be operated and maintained in accordance with manufacturer's recommendations and good engineering practices at all times.

# 3. Continuous Emission Monitoring Requirements

Note that the continuous emission monitoring requirements identified in this Condition, are in addition to the continuous emission monitoring requirements required by the Acid Rain Program, which are identified in Section III of this permit.

- 3.1 Equipment and QA/QC Requirements
  - 3.1.1 The Continuous Emission Monitoring Systems (CEMS) are subject to the following requirements:
    - 3.1.1.1 Except as provided for below, the **CO monitors are** subject to the requirements of 40 CR Part 60 (Colorado Construction Permit 91MR933, initial approval, modification 4, dated October 26, 1999). The monitoring systems shall meet the equipment, installation and performance specifications of 40 CFR Part 60 Appendix B, Performance Specification 4/4A. These CEMS are subject to the quality assurance/quality control requirements in 40 CFR Part 60 Appendix F and Subpart A § 60.13.
      - a. The CO CEMS data shall meet the applicable "primary equipment hourly operating requirements" for hourly average calculation methodology specified in 40 CFR Part 75 Subpart B § 75.10(d)(1).
      - b. Annual CO monitor relative accuracy (RA) testing will be performed in ppm @ 15% O<sub>2</sub> measurement units, and will be performed according to 40 CFR Part 60, Appendix B, Performance Specification 4A.
      - c. Relative accuracy test audit (RATA) frequency will be determined according to 40 CFR Part 75 Appendix B.

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- 3.1.1.2 The **NO**<sub>X</sub> (and diluent) monitors are subject to the requirements of 40 CFR Part 75. The monitoring systems shall meet the equipment, installation and performance specification requirements in 40 CFR Part 75, Appendix A. These CEMS shall meet the quality assurance/quality control requirements in 40 CFR Part 75, Appendix B, the conversion procedures of Appendix F and the traceability protocols of Appendix H. In addition, annual NO<sub>X</sub> monitor RA testing will be performed in ppm @ 15% O<sub>2</sub> measurement units, and will be performed according to 40 CFR Part 60, Appendix B, Specification 2. RATA testing frequency will be determined according to 40 CFR Part 75, Appendix B.
- 3.1.2 Quality assurance/quality control plans shall be prepared for the continuous emission monitoring systems as follows:
  - 3.1.2.1 The quality assurance/quality control plan for the **CO monitors** shall be prepared in accordance with the requirements in 40 CFR Part 60, Appendix F.
  - 3.1.2.2 The quality assurance /quality control plan for the **NO**<sub>X</sub> (and diluent) monitors shall be prepared in accordance with the requirements in 40 CFR Part 75, Appendix B.

The quality assurance/quality control plans shall be made available to the Division upon request. Revisions shall be made to the plans at the request of the Division.

3.1.3 The Division may take direct enforcement action based solely on CEMS data if the data show any excursions above the Oxides of Nitrogen or Carbon Monoxide limitations (Colorado Construction Permit 91MR933, initial approval, modification 4, dated October 26, 1999).

#### 3.2 General Provisions

- 3.2.1 **CO monitors:** The permittee shall ensure that all continuous emission monitoring systems required are in operation and monitoring unit emissions at all times except for monitoring system breakdowns, repairs, calibration checks and zero and span adjustments required under 40 CFR Part 60 Subpart A § 60.13(d) (40 CFR Part 60 Subpart A § 60.13(e)).
- NO<sub>X</sub> (and diluent) monitors: The permittee shall ensure that all continuous emission monitoring systems required are in operation and monitoring unit emissions at all times that the boiler combusts any fuel except as provided in 40 CFR § 75.11(e) and during periods of calibration, quality assurance, or preventative maintenance performed pursuant to 40 CFR Part 75, § 75.21 and Appendix B, periods of repair, periods of backups of data from the data acquisition and handling system or recertification performed pursuant to 40 CFR § 75.20. (40 CFR Part 75 § 75.10(d)).

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- 3.2.3 Alternative monitoring systems, alternative reference methods, or any other alternatives for the required continuous emission monitoring systems shall not be used without having obtained prior written approval from the appropriate agency, either the Division or the U. S. EPA, depending on which agency is authorized to approve such alternative under applicable law. Any alternative continuous emission monitoring systems or continuous opacity monitoring systems must be certified in accordance with the requirements of 40 CFR Part 60 or 40 CFR Part 75, as appropriate, prior to use.
- 3.2.4 All test and monitoring equipment, methods, procedures and reporting shall be subject to the review and approval by the appropriate agency, either the Division or the U. S. EPA, depending on which agency is authorized to approve such item under applicable law, prior to any official use. The Division shall have the right to inspect such equipment, methods and procedures and data obtained at any time. The Division may provide a witness(s) for any and all tests as Division resources permit.
- 3.2.5 A file suitable for inspection shall be maintained of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by applicable portions of 40 CFR Part 60 Subpart A and Appendices B and F and 40 CFR Part 75. This file may be in a hardcopy format, electronic format, or combination of these two methods.
- 3.2.6 Records shall be maintained of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the source; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative (40 CFR Part 60 Subpart A § 60.7(b) and Colorado Construction Permit 91MR933, initial approval, modification 4, dated October 26, 1999).

# 3.3 Recordkeeping and Reporting Requirements

- 3.3.1 The owner or operator of a facility required to install, maintain, and calibrate continuous monitoring equipment shall submit to the Division, by the end of the calendar month following the end of each calendar quarter, a report of excess emissions for all pollutants monitored for that quarter [40 CFR Part 60 Subpart A § 60.7(c)]. This report shall consist of the following information and/or reporting requirements as specified by the Division:
  - 3.3.1.1 The magnitude of excess emissions computed in accordance with 40 CFR Part 60 Subpart A § 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess

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- emissions and the process operating time during the reporting period [40 CFR Part 60 Subpart A  $\S$  60.7(c)(1)].
- 3.3.1.2 Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted [40 CFR Part 60 Subpart A § 60.7(c)(2)].
- 3.3.1.3 The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments [40 CFR Part 60 Subpart A § 60.7(c)(3)].
- 3.3.1.4 When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report [40 CFR Part 60 Subpart A § 60.7(c)(4)].
- 3.3.2 The owner or operator of a facility required to install, maintain, and calibrate continuous monitoring equipment shall submit to the Division, by the end of the calendar month following the end of each calendar quarter, a summary report for that quarter [40 CFR Part 60 Subpart A § 60.7(c)]. One summary report form shall be submitted for each pollutant monitored. This report shall contain the information and be presented in a format approved by the Division.

If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and continuous monitoring system (CMS) downtime is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in Condition 3.3.1 need not be submitted unless required by the Division [40 CFR Part 60 Subpart A § 60.7(d)(1)].

If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in Condition 3.3.1 shall both be submitted [40 CFR Part 60 Subpart A § 60.7(d)(2)].

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#### **SECTION III - Acid Rain Requirements**

# 1. Designated Representative and Alternate Designated Representative

Designated Representative: Alternate Designated Representative:

Name: Douglas Halliday Name: Richard Olsen

Title: Executive Vice President/COO Title: Vice President, Operations

Beowulf Energy, LLC Colorado Energy Management, LLC

Phone: (410) 770-9500 Phone: (303) 607-5599

Changes to the Designated Representative or Alternate Designated Representative shall be made in accordance with 40 CFR Part 72 § 72.23.

#### 2. Sulfur Dioxide Emission Allowances and Nitrogen Oxide Emission Limitations

Combustion Turbine No. GT-2	2009	2010	2011	2012	2013	2014
SO <sub>2</sub> Allowances, per 40 CFR Part 73.10(b), Table 2	0*	0*	0*	0*	0*	0*
NO <sub>X</sub> Limits	This Unit Has No NO <sub>X</sub> Limits (See Section 4)					

<sup>\*</sup> Under the provisions of § 72.84(a) any allowance allocations to, transfers to and deductions from an affected unit's Allowance Tracking System account is considered an automatic permit amendment and as such no revision to the permit is necessary. Numerical allowances shown in this table are from the 1996 edition of the CFR.

#### 3. Standard Requirements

Combustion Turbine No. GT-2 (Brush 3) of this facility is subject to the Acid Rain Program and the source has certified that they will comply with the following Acid Rain Requirements (standard requirements specified in 40 CFR Part 72 §72.9).

#### Permit Requirements.

- (1) The designated representative of each affected source and each affected unit at the source shall:
  - i) Submit a complete Acid Rain permit application (including a compliance plan) under 40 CFR part 72 in accordance with the deadlines specified in 40 CFR 72.30; and
  - ii) Submit in a timely manner any supplemental information that the Division determines is necessary in order to review an Acid Rain permit application and issue or deny an Acid Rain permit;
- (2) The owners and operators of each affected source and each affected unit at the source shall:

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- i) Operate the unit in compliance with a complete Acid Rain permit application or a superseding Acid Rain permit issued by the Division; and
- ii) Have an Acid Rain Permit.

### Monitoring Requirements.

- (1) The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75.
- (2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the source or unit, as appropriate, with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
- (3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Federal Clean Air Act and other provisions of the operating permit for the source.

# Sulfur Dioxide Requirements.

- (1) The owners and operators of each source and each affected unit at the source shall:
  - i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance account (after deductions under 40 CFR 73.34(c)), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the affected units at the source; and
  - ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
- (2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Federal Clean Air Act.
- (3) An affected unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
  - i) Starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2); or
  - ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3).
- (4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
- (5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.

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- (6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
- (7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

<u>Nitrogen Oxides Requirements</u>. The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

#### Excess Emissions Requirements.

- (1) The designated representative of an affected source that has excess emissions in any calendar year shall submit a proposed offset plan to the Administrator of the U. S. EPA, as required under 40 CFR part 77.
- (2) The owners and operators of an affected unit that has excess emissions in any calendar year shall:
  - i) Pay without demand, to the Administrator of the U. S. EPA, the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
  - ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

#### Recordkeeping and Reporting Requirements.

- (1) Unless otherwise provided, the owners and operators of the source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or the Division:
  - i) The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
  - ii) All emissions monitoring information, in accordance with 40 CFR part 75, provided that to the extent that 40 CFR part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply.
  - iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,

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- iv) Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.
- (2) The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

#### Liability.

- (1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain permit application, an Acid Rain permit, or a written exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Federal Clean Air Act.
- (2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Federal Clean Air Act and 18 U.S.C. 1001.
- (3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
- (4) Each affected source and each affected unit shall meet the requirements of the Acid Rain Program.
- (5) Any provision of the Acid Rain Program that applies to an affected source (including a provision applicable to the designated representative of an affected source) shall also apply to the owners and operators of such source and of the affected units at the source.
- (6) Any provision of the Acid Rain Program that applies to an affected unit (including a provision applicable to the designated representative of an affected unit) shall also apply to the owners and operators of such unit.
- (7) Each violation of a provision of 40 CFR parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Federal Clean Air Act.

<u>Effect on Other Authorities</u>. No provision of the Acid Rain Program, an Acid Rain permit application, an Acid Rain permit, or a written exemption under 40 CFR 72.7 or 72.8 shall be construed as:

(1) Except as expressly provided in title IV of the Federal Clean Air Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with any other provision of the Federal Clean Air Act, including the provisions of title I of the Federal Clean Air Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;

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- (2) Limiting the number of allowances a source can hold; provided, that the number of allowances held by the source shall not affect the source's obligation to comply with any other provisions of the Federal Clean Air Act;
- (3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;
- (4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
- (5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

#### 4. Reporting Requirements

Reports shall be submitted to the addresses identified in Appendix D.

Pursuant to 40 CFR Part § 75.64 quarterly reports and compliance certification requirements shall be submitted to the Administrator within 30 days after the end of the calendar quarter. The contents of these reports shall meet the requirements of 40 CFR Part 75 § 75.64.

Revisions to this permit shall be made in accordance with 40 CFR Part 72, Subpart H, §§ 72.80 through 72.85 (as adopted by reference in Colorado Regulation 18). Permit modification requests shall be submitted to the Division at the address identified in Appendix A.

#### 5. Comments, Notes and Justifications

Combustion Turbine No. GT-2 burns only natural gas. The  $NO_X$  limitations in 40 CFR Part 76 are only applicable to coal-fired utility units.

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#### **SECTION IV - - Permit Shield**

Regulation No. 3, 5 CCR 1001-5, Part C, §§ I.A.4; V.D., & XIII.B; § 25-7-114.4(3)(a), C.R.S.

#### 1. Specific Non-Applicable Requirements

Based on the information available to the Division and supplied by the applicant, the following parameters and requirements have been specifically identified as non-applicable to the facility to which this permit has been issued. This shield does not protect the source from any violations that occurred prior to or at the time of permit issuance. In addition, this shield does not protect the source from any violations that occur as a result of any modifications or reconstruction on which construction commenced prior to permit issuance.

No requirements have been specifically identified as non-applicable for this facility.

#### 2. General Conditions

Compliance with this Operating Permit shall be deemed compliance with all applicable requirements specifically identified in the permit and other requirements specifically identified in the permit as not applicable to the source. This permit shield shall not alter or affect the following:

- 2.1 The provisions of §§ 25-7-112 and 25-7-113, C.R.S., or § 303 of the federal act, concerning enforcement in cases of emergency;
- 2.2 The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
- 2.3 The applicable requirements of the federal Acid Rain Program, consistent with § 408(a) of the federal act;
- 2.4 The ability of the Air Pollution Control Division to obtain information from a source pursuant to § 25-7-111(2)(I), C.R.S., or the ability of the Administrator to obtain information pursuant to § 114 of the federal act:
- 2.5 The ability of the Air Pollution Control Division to reopen the Operating Permit for cause pursuant to Regulation No. 3, Part C, § XIII.
- 2.6 Sources are not shielded from terms and conditions that become applicable to the source subsequent to permit issuance.

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#### 3. Streamlined Conditions

The following applicable requirements have been subsumed within this operating permit using the pertinent streamlining procedures approved by the U.S. EPA. For purposes of the permit shield, compliance with the listed permit conditions will also serve as a compliance demonstration for purposes of the associated subsumed requirements.

Permit Condition	Streamlined (Subsumed) Requirements
Section II, Condition 1.4.1	40 CFR Part 60 Subpart GG § 60.332(b), as adopted by reference in Colorado Regulation No. 6, Part A, including exemptions in §§ 60.332(f) & (i) [NO <sub>X</sub> emissions shall not exceed 75 ppmvd at 15% O <sub>2</sub> and ISO standard ambient conditions].
Section II, Condition 1.7	Colorado Construction Permit 91MR933, Condition 11, initial approval, modification 4, dated October 26, 1999 [continuous monitoring system to monitor quantity of water used for injection]
Section II, Conditions 3.1 and 3.2.	Colorado Construction Permit 91MR933, Conditions 9.h & m and 10, initial approval, modification 4, dated October 26, 1999 [continuous emission monitoring systems shall meet requirements in 40 CFR Part 60] for the NO <sub>X</sub> and diluent continuous emission monitoring systems only.
Section II, Condition 1.9	40 CFR Part 60 Subpart GG §§ 60.334(h)(3), as adopted by reference in Colorado Regulation No. 6, Part A [monitor sulfur content of fuel]
Section II, Condition 3.3	40 CFR Part 60 Subpart GG § 60.334(j)(1)(iii), as adopted by reference in Colorado Regulation No. 6, Part A [NO <sub>X</sub> excess emission reporting]
Section II, Condition 1.4.1	40 CFR Part 60 Subpart Db §§ 60.44b(a)(4)(i), (h) & (i), as adopted by reference in Colorado Regulation No. 6, Part A [NO <sub>X</sub> emissions shall not exceed 0.20 lb/mmBtu, on a 30-day rolling average, applies at all times, including periods of startup, shutdown and malfunction]
Section V, Conditions 22.b and c	40 CFR Part 60 Subpart Db § 60.49b(o), as adopted by reference in Colorado Regulation No. 6, Part A [retain records for 2 yrs]
Section II, Condition 1.3.3	Regulation No. 6, Part B, Section II.D.3.b [SO <sub>2</sub> emissions not to exceed 0.35 lbs/mmBtu] - <b>State-only Requirement</b>
Section II, Conditions 1.2.2	Regulation No. 6, Part B, Section II.C.2 [particulate matter standard] - State-only Requirement

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#### **SECTION V - - General Permit Conditions**

11/16/10 version

#### 1. Administrative Changes

#### Regulation No. 3, 5 CCR 1001-5, Part A, § III.

The permittee shall submit an application for an administrative permit amendment to the Division for those permit changes that are described in Regulation No. 3, Part A, § I.B.1. The permittee may immediately make the change upon submission of the application to the Division.

#### 2. Certification Requirements

#### Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.B.9., V.C.16.a.& e. and V.C.17.

- a. Any application, report, document and compliance certification submitted to the Air Pollution Control Division pursuant to Regulation No. 3 or the Operating Permit shall contain a certification by a responsible official of the truth, accuracy and completeness of such form, report or certification stating that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
- b. All compliance certifications for terms and conditions in the Operating Permit shall be submitted to the Air Pollution Control Division at least annually unless a more frequent period is specified in the applicable requirement or by the Division in the Operating Permit.
- c. Compliance certifications shall contain:
  - (i) the identification of each permit term and condition that is the basis of the certification;
  - (ii) the compliance status of the source;
  - (iii) whether compliance was continuous or intermittent;
  - (iv) method(s) used for determining the compliance status of the source, currently and over the reporting period; and
  - such other facts as the Air Pollution Control Division may require to determine the compliance status of the source.
- d. All compliance certifications shall be submitted to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit.
- e. If the permittee is required to develop and register a risk management plan pursuant to § 112(r) of the federal act, the permittee shall certify its compliance with that requirement; the Operating Permit shall not incorporate the contents of the risk management plan as a permit term or condition.

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#### 3. Common Provisions

#### Common Provisions Regulation, 5 CCR 1001-2 §§ II.A., II.B., II.C., II,E., II.F., II.I, and II.J

a. To Control Emissions Leaving Colorado

When emissions generated from sources in Colorado cross the State boundary line, such emissions shall not cause the air quality standards of the receiving State to be exceeded, provided reciprocal action is taken by the receiving State.

b. Emission Monitoring Requirements

The Division may require owners or operators of stationary air pollution sources to install, maintain, and use instrumentation to monitor and record emission data as a basis for periodic reports to the Division.

c. Performance Testing

The owner or operator of any air pollution source shall, upon request of the Division, conduct performance test(s) and furnish the Division a written report of the results of such test(s) in order to determine compliance with applicable emission control regulations.

Performance test(s) shall be conducted and the data reduced in accordance with the applicable reference test methods unless the Division:

- (i) specifies or approves, in specific cases, the use of a test method with minor changes in methodology;
- (ii) approves the use of an equivalent method;
- (iii) approves the use of an alternative method the results of which the Division has determined to be adequate for indicating where a specific source is in compliance; or
- (iv) waives the requirement for performance test(s) because the owner or operator of a source has demonstrated by other means to the Division's satisfaction that the affected facility is in compliance with the standard. Nothing in this paragraph shall be construed to abrogate the Commission's or Division's authority to require testing under the Colorado Revised Statutes, Title 25, Article 7, and pursuant to regulations promulgated by the Commission.

Compliance test(s) shall be conducted under such conditions as the Division shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Division such records as may be necessary to determine the conditions of the performance test(s). Operations during period of startup, shutdown, and malfunction shall not constitute representative conditions of performance test(s) unless otherwise specified in the applicable standard.

The owner or operator of an affected facility shall provide the Division thirty days prior notice of the performance test to afford the Division the opportunity to have an observer present. The Division may waive the thirty day notice requirement provided that arrangements satisfactory to the Division are made for earlier testing.

The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

- (i) Sampling ports adequate for test methods applicable to such facility;
- (ii) Safe sampling platform(s);

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- (iii) Safe access to sampling platform(s); and
- (iv) Utilities for sampling and testing equipment.

Each performance test shall consist of at least three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic mean of results of at least three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the owner or operator's control, compliance may, upon the Division's approval, be determined using the arithmetic mean of the results of the two other runs.

Nothing in this section shall abrogate the Division's authority to conduct its own performance test(s) if so warranted.

d. Affirmative Defense Provision for Excess Emissions during Malfunctions

Note that until such time as the U.S. EPA approves this provision into the Colorado State Implementation Plan (SIP), it shall be enforceable only by the State.

An affirmative defense to a claim of violation under these regulations is provided to owners and operators for civil penalty actions for excess emissions during periods of malfunction. To establish the affirmative defense and to be relieved of a civil penalty in any action to enforce an applicable requirement, the owner or operator of the facility must meet the notification requirements below in a timely manner and prove by a preponderance of evidence that:

- (i) The excess emissions were caused by a sudden, unavoidable breakdown of equipment, or a sudden, unavoidable failure of a process to operate in the normal or usual manner, beyond the reasonable control of the owner or operator;
- (ii) The excess emissions did not stem from any activity or event that could have reasonably been foreseen and avoided, or planned for, and could not have been avoided by better operation and maintenance practices;
- (iii) Repairs were made as expeditiously as possible when the applicable emission limitations were being exceeded;
- (iv) The amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions;
- (v) All reasonably possible steps were taken to minimize the impact of the excess emissions on ambient air quality;
- (vi) All emissions monitoring systems were kept in operation (if at all possible);
- (vii) The owner or operator's actions during the period of excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence;
- (viii) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;
- (ix) At all times, the facility was operated in a manner consistent with good practices for minimizing emissions. This section is intended solely to be a factor in determining whether an affirmative defense is available to an owner or operator, and shall not constitute an additional applicable requirement; and
- (x) During the period of excess emissions, there were no exceedances of the relevant ambient air quality standards established in the Commissions' Regulations that could be attributed to the emitting source.

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The owner or operator of the facility experiencing excess emissions during a malfunction shall notify the division verbally as soon as possible, but no later than noon of the Division's next working day, and shall submit written notification following the initial occurrence of the excess emissions by the end of the source's next reporting period. The notification shall address the criteria set forth above.

The Affirmative Defense Provision contained in this section shall not be available to claims for injunctive relief.

The Affirmative Defense Provision does not apply to failures to meet federally promulgated performance standards or emission limits, including, but not limited to, new source performance standards and national emission standards for hazardous air pollutants. The affirmative defense provision does not apply to state implementation plan (sip) limits or permit limits that have been set taking into account potential emissions during malfunctions, including, but not necessarily limited to, certain limits with 30-day or longer averaging times, limits that indicate they apply during malfunctions, and limits that indicate they apply at all times or without exception.

#### e. Circumvention Clause

A person shall not build, erect, install, or use any article, machine, equipment, condition, or any contrivance, the use of which, without resulting in a reduction in the total release of air pollutants to the atmosphere, reduces or conceals an emission which would otherwise constitute a violation of this regulation. No person shall circumvent this regulation by using more openings than is considered normal practice by the industry or activity in question.

#### f. Compliance Certifications

For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in the Colorado State Implementation Plan, nothing in the Colorado State Implementation Plan shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. Evidence that has the effect of making any relevant standard or permit term more stringent shall not be credible for proving a violation of the standard or permit term.

When compliance or non-compliance is demonstrated by a test or procedure provided by permit or other applicable requirement, the owner or operator shall be presumed to be in compliance or non-compliance unless other relevant credible evidence overcomes that presumption.

### g. Affirmative Defense Provision for Excess Emissions During Startup and Shutdown

An affirmative defense is provided to owners and operators for civil penalty actions for excess emissions during periods of startup and shutdown. To establish the affirmative defense and to be relieved of a civil penalty in any action to enforce an applicable requirement, the owner or operator of the facility must meet the notification requirements below in a timely manner and prove by a preponderance of the evidence that:

- (i) The periods of excess emissions that occurred during startup and shutdown were short and infrequent and could not have been prevented through careful planning and design;
- (ii) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation or maintenance;
- (iii) If the excess emissions were caused by a bypass (an intentional diversion of control equipment), then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- (iv) The frequency and duration of operation in startup and shutdown periods were minimized to the maximum extent practicable;
- (v) All possible steps were taken to minimize the impact of excess emissions on ambient air quality;

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- (vi) All emissions monitoring systems were kept in operation (if at all possible);
- (vii) The owner or operator's actions during the period of excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence; and,
- (viii) At all times, the facility was operated in a manner consistent with good practices for minimizing emissions. This subparagraph is intended solely to be a factor in determining whether an affirmative defense is available to an owner or operator, and shall not constitute an additional applicable requirement.

The owner or operator of the facility experiencing excess emissions during startup and shutdown shall notify the Division verbally as soon as possible, but no later than two (2) hours after the start of the next working day, and shall submit written quarterly notification following the initial occurrence of the excess emissions. The notification shall address the criteria set forth above.

The Affirmative Defense Provision contained in this section shall not be available to claims for injunctive relief.

The Affirmative Defense Provision does not apply to State Implementation Plan provisions or other requirements that derive from new source performance standards or national emissions standards for hazardous air pollutants, or any other federally enforceable performance standard or emission limit with an averaging time greater than twenty-four hours. In addition, an affirmative defense cannot be used by a single source or small group of sources where the excess emissions have the potential to cause an exceedance of the ambient air quality standards or Prevention of Significant Deterioration (PSD) increments.

In making any determination whether a source established an affirmative defense, the Division shall consider the information within the notification required above and any other information the Division deems necessary, which may include, but is not limited to, physical inspection of the facility and review of documentation pertaining to the maintenance and operation of process and air pollution control equipment.

### 4. Compliance Requirements

### Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.C.9., V.C.11. & 16.d. and § 25-7-122.1(2), C.R.S.

- a. The permittee must comply with all conditions of the Operating Permit. Any permit noncompliance relating to federally-enforceable terms or conditions constitutes a violation of the federal act, as well as the state act and Regulation No. 3. Any permit noncompliance relating to state-only terms or conditions constitutes a violation of the state act and Regulation No. 3, shall be enforceable pursuant to state law, and shall not be enforceable by citizens under § 304 of the federal act. Any such violation of the federal act, the state act or regulations implementing either statute is grounds for enforcement action, for permit termination, revocation and reissuance or modification or for denial of a permit renewal application.
- b. It shall not be a defense for a permittee in an enforcement action or a consideration in favor of a permittee in a permit termination, revocation or modification action or action denying a permit renewal application that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.
- c. The permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of any request by the permittee for a permit modification, revocation and reissuance, or termination, or any notification of planned changes or anticipated noncompliance does not stay any permit condition, except as provided in §§ X. and XI. of Regulation No. 3, Part C.
- d. The permittee shall furnish to the Air Pollution Control Division, within a reasonable time as specified by the Division, any information that the Division may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Division copies of records required to be kept by the permittee, including

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- information claimed to be confidential. Any information subject to a claim of confidentiality shall be specifically identified and submitted separately from information not subject to the claim.
- e. Any schedule for compliance for applicable requirements with which the source is not in compliance at the time of permit issuance shall be supplemental, and shall not sanction noncompliance with, the applicable requirements on which it is based.
- f. For any compliance schedule for applicable requirements with which the source is not in compliance at the time of permit issuance, the permittee shall submit, at least every 6 months unless a more frequent period is specified in the applicable requirement or by the Air Pollution Control Division, progress reports which contain the following:
  - (i) dates for achieving the activities, milestones, or compliance required in the schedule for compliance, and dates when such activities, milestones, or compliance were achieved; and
  - (ii) an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.
- g. The permittee shall not knowingly falsify, tamper with, or render inaccurate any monitoring device or method required to be maintained or followed under the terms and conditions of the Operating Permit.

#### 5. Emergency Provisions

#### Regulation No. 3, 5 CCR 1001-5, Part C, § VII.

An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed the technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. "Emergency" does not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error. An emergency constitutes an affirmative defense to an enforcement action brought for noncompliance with a technology-based emission limitation if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- a. an emergency occurred and that the permittee can identify the cause(s) of the emergency;
- b. the permitted facility was at the time being properly operated;
- c. during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
- d. the permittee submitted oral notice of the emergency to the Air Pollution Control Division no later than noon of the next working day following the emergency, and followed by written notice within one month of the time when emissions limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

This emergency provision is in addition to any emergency or malfunction provision contained in any applicable requirement.

#### 6. Emission Controls for Asbestos

### Regulation No. 8, 5 CCR 1001-10, Part B

The permittee shall not conduct any asbestos abatement activities except in accordance with the provisions of Regulation No. 8, Part B, "asbestos control."

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# 7. Emissions Trading, Marketable Permits, Economic Incentives

### Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.13.

No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are specifically provided for in the permit.

#### 8. Fee Payment

#### C.R.S. §§ 25-7-114.1(6) and 25-7-114.7

- a. The permittee shall pay an annual emissions fee in accordance with the provisions of § 25-7-114.7. A 1% per month late payment fee shall be assessed against any invoice amounts not paid in full on the 91st day after the date of invoice, unless a permittee has filed a timely protest to the invoice amount.
- b. The permittee shall pay a permit processing fee in accordance with the provisions of C.R.S § 25-7-114.7. If the Division estimates that processing of the permit will take more than 30 hours, it will notify the permittee of its estimate of what the actual charges may be prior to commencing any work exceeding the 30 hour limit.
- c. The permittee shall pay an APEN fee in accordance with the provisions of § 25-7-114.1(6) for each APEN or revised APEN filed.

#### 9. Fugitive Particulate Emissions

### Regulation No. 1, 5 CCR 1001-3, § III.D.1.

The permittee shall employ such control measures and operating procedures as are necessary to minimize fugitive particulate emissions into the atmosphere, in accordance with the provisions of Regulation No. 1, § III.D.1.

### 10. Inspection and Entry

#### Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.16.b.

Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Air Pollution Control Division, or any authorized representative, to perform the following:

- a. enter upon the permittee's premises where an Operating Permit source is located, or emissions-related activity is conducted, or where records must be kept under the terms of the permit;
- b. have access to, and copy, at reasonable times, any records that must be kept under the conditions of the permit;
- c. inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the Operating Permit;
- d. sample or monitor at reasonable times, for the purposes of assuring compliance with the Operating Permit or applicable requirements, any substances or parameters.

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#### 11. Minor Permit Modifications

### Regulation No. 3, 5 CCR 1001-5, Part C, §§ X. & XI.

The permittee shall submit an application for a minor permit modification before making the change requested in the application. The permit shield shall not extend to minor permit modifications.

#### 12. New Source Review

#### Regulation No. 3, 5 CCR 1001-5, Part B

The permittee shall not commence construction or modification of a source required to be reviewed under the New Source Review provisions of Regulation No. 3, Part B, without first receiving a construction permit.

#### 13. No Property Rights Conveyed

### Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.11.d.

This permit does not convey any property rights of any sort, or any exclusive privilege.

#### 14. Odor

#### Regulation No. 2, 5 CCR 1001-4, Part A

As a matter of state law only, the permittee shall comply with the provisions of Regulation No. 2 concerning odorous emissions.

#### 15. Off-Permit Changes to the Source

#### Regulation No. 3, 5 CCR 1001-5, Part C, § XII.B.

The permittee shall record any off-permit change to the source that causes the emissions of a regulated pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from the change, including any other data necessary to show compliance with applicable ambient air quality standards. The permittee shall provide contemporaneous notification to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit . The permit shield shall not apply to any off-permit change.

#### 16. Opacity

#### Regulation No. 1, 5 CCR 1001-3, §§ I., II.

The permittee shall comply with the opacity emissions limitation set forth in Regulation No. 1, §§ I.-II.

#### 17. Open Burning

#### Regulation No. 9, 5 CCR 1001-11

The permittee shall obtain a permit from the Division for any regulated open burning activities in accordance with provisions of Regulation No. 9.

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#### 18. Ozone Depleting Compounds

### Regulation No. 15, 5 CCR 1001-17

The permittee shall comply with the provisions of Regulation No. 15 concerning emissions of ozone depleting compounds. Sections I., II.C., II.D., III. IV., and V. of Regulation No. 15 shall be enforced as a matter of state law only.

#### 19. Permit Expiration and Renewal

#### Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.B.6., IV.C., V.C.2.

- a. The permit term shall be five (5) years. The permit shall expire at the end of its term. Permit expiration terminates the permittee's right to operate unless a timely and complete renewal application is submitted.
- b. Applications for renewal shall be submitted at least twelve months, but not more than 18 months, prior to the expiration of the Operating Permit. An application for permit renewal may address only those portions of the permit that require revision, supplementing, or deletion, incorporating the remaining permit terms by reference from the previous permit. A copy of any materials incorporated by reference must be included with the application.

#### 20. Portable Sources

#### Regulation No. 3, 5 CCR 1001-5, Part C, § II.D.

Portable Source permittees shall notify the Air Pollution Control Division at least 10 days in advance of each change in location.

#### 21. Prompt Deviation Reporting

### Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.7.b.

The permittee shall promptly report any deviation from permit requirements, including those attributable to malfunction conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken.

"Prompt" is defined as follows:

- a. Any definition of "prompt" or a specific timeframe for reporting deviations provided in an underlying applicable requirement as identified in this permit; or
- b. Where the underlying applicable requirement fails to address the time frame for reporting deviations, reports of deviations will be submitted based on the following schedule:
  - (i) For emissions of a hazardous air pollutant or a toxic air pollutant (as identified in the applicable regulation) that continue for more than an hour in excess of permit requirements, the report shall be made within 24 hours of the occurrence;
  - (ii) For emissions of any regulated air pollutant, excluding a hazardous air pollutant or a toxic air pollutant that continue for more than two hours in excess of permit requirements, the report shall be made within 48 hours; and
  - (iii) For all other deviations from permit requirements, the report shall be submitted every six (6) months, except as otherwise specified by the Division in the permit in accordance with paragraph 22.d. below.

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c. If any of the conditions in paragraphs b.i or b.ii above are met, the source shall notify the Division by telephone (303-692-3155) or facsimile (303-782-0278) based on the timetables listed above. [Explanatory note: Notification by telephone or facsimile must specify that this notification is a deviation report for an Operating Permit.] A written notice, certified consistent with General Condition 2.a. above (Certification Requirements), shall be submitted within 10 working days of the occurrence. All deviations reported under this section shall also be identified in the 6-month report required above.

"Prompt reporting" does not constitute an exception to the requirements of "Emergency Provisions" for the purpose of avoiding enforcement actions.

#### 22. Record Keeping and Reporting Requirements

#### Regulation No. 3, 5 CCR 1001-5, Part A, § II.; Part C, §§ V.C.6., V.C.7.

- a. Unless otherwise provided in the source specific conditions of this Operating Permit, the permittee shall maintain compliance monitoring records that include the following information:
  - (i) date, place as defined in the Operating Permit, and time of sampling or measurements;
  - (ii) date(s) on which analyses were performed;
  - (iii) the company or entity that performed the analysis;
  - (iv) the analytical techniques or methods used;
  - (v) the results of such analysis; and
  - (vi) the operating conditions at the time of sampling or measurement.
- b. The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring sample, measurement, report or application. Support information, for this purpose, includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the Operating Permit. With prior approval of the Air Pollution Control Division, the permittee may maintain any of the above records in a computerized form.
- c. Permittees must retain records of all required monitoring data and support information for the most recent twelve (12) month period, as well as compliance certifications for the past five (5) years on-site at all times. A permittee shall make available for the Air Pollution Control Division's review all other records of required monitoring data and support information required to be retained by the permittee upon 48 hours advance notice by the Division.
- d. The permittee shall submit to the Air Pollution Control Division all reports of any required monitoring at least every six (6) months, unless an applicable requirement, the compliance assurance monitoring rule, or the Division requires submission on a more frequent basis. All instances of deviations from any permit requirements must be clearly identified in such reports.
- e. The permittee shall file an Air Pollutant Emissions Notice ("APEN") prior to constructing, modifying, or altering any facility, process, activity which constitutes a stationary source from which air pollutants are or are to be emitted, unless such source is exempt from the APEN filing requirements of Regulation No. 3, Part A, § II.D. A revised APEN shall be filed annually whenever a significant change in emissions, as defined in Regulation No. 3, Part A, § II.C.2., occurs; whenever there is a change in owner or operator of any facility, process, or activity; whenever new control equipment is installed; whenever a different type of control equipment replaces an existing type of control equipment; whenever a permit limitation must be modified; or before the APEN expires. An APEN is valid for a period of five years. The five-year period recommences when a revised APEN is received by the Air Pollution Control Division. Revised APENs shall be submitted no later than 30 days before the five-year term expires.

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Permittees submitting revised APENs to inform the Division of a change in actual emission rates must do so by April 30 of the following year. Where a permit revision is required, the revised APEN must be filed along with a request for permit revision. APENs for changes in control equipment must be submitted before the change occurs. Annual fees are based on the most recent APEN on file with the Division.

#### 23. Reopenings for Cause

### Regulation No. 3, 5 CCR 1001-5, Part C, § XIII.

- a. The Air Pollution Control Division shall reopen, revise, and reissue Operating Permits; permit reopenings and reissuance shall be processed using the procedures set forth in Regulation No. 3, Part C, § III., except that proceedings to reopen and reissue permits affect only those parts of the permit for which cause to reopen exists.
- b. The Division shall reopen a permit whenever additional applicable requirements become applicable to a major source with a remaining permit term of three or more years, unless the effective date of the requirements is later than the date on which the permit expires, or unless a general permit is obtained to address the new requirements; whenever additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program; whenever the Division determines the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or whenever the Division determines that the permit must be revised or revoked to assure compliance with an applicable requirement.
- c. The Division shall provide 30 days' advance notice to the permittee of its intent to reopen the permit, except that a shorter notice may be provided in the case of an emergency.
- d. The permit shield shall extend to those parts of the permit that have been changed pursuant to the reopening and reissuance procedure.

#### **24.** Section 502(b)(10) Changes

#### Regulation No. 3, 5 CCR 1001-5, Part C, § XII.A.

The permittee shall provide a minimum 7-day advance notification to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit. The permittee shall attach a copy of each such notice given to its Operating Permit.

#### 25. Severability Clause

#### Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.10.

In the event of a challenge to any portion of the permit, all emissions limits, specific and general conditions, monitoring, record keeping and reporting requirements of the permit, except those being challenged, remain valid and enforceable.

### 26. Significant Permit Modifications

# Regulation No. 3, 5 CCR 1001-5, Part C, § III.B.2.

The permittee shall not make a significant modification required to be reviewed under Regulation No. 3, Part B ("Construction Permit" requirements) without first receiving a construction permit. The permittee shall submit a complete Operating Permit application or application for an Operating Permit revision for any new or modified source within twelve months of commencing operation, to the address listed in Item 1 in Appendix D of this permit. If the permittee chooses to use the "Combined Construction/Operating Permit" application procedures of Regulation No. 3, Part C, then the Operating Permit must be received prior to commencing construction of the new or modified source.

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#### 27. Special Provisions Concerning the Acid Rain Program

#### Regulation No. 3, 5 CCR 1001-5, Part C, §§ V.C.1.b. & 8

- a. Where an applicable requirement of the federal act is more stringent than an applicable requirement of regulations promulgated under Title IV of the federal act, 40 Code of Federal Regulations (CFR) Part 72, both provisions shall be incorporated into the permit and shall be federally enforceable.
- b. Emissions exceeding any allowances that the source lawfully holds under Title IV of the federal act or the regulations promulgated thereunder, 40 CFR Part 72, are expressly prohibited.

#### 28. Transfer or Assignment of Ownership

### Regulation No. 3, 5 CCR 1001-5, Part C, § II.C.

No transfer or assignment of ownership of the Operating Permit source will be effective unless the prospective owner or operator applies to the Air Pollution Control Division on Division-supplied Administrative Permit Amendment forms, for reissuance of the existing Operating Permit. No administrative permit shall be complete until a written agreement containing a specific date for transfer of permit, responsibility, coverage, and liability between the permittee and the prospective owner or operator has been submitted to the Division.

# 29. Volatile Organic Compounds

#### Regulation No. 7, 5 CCR 1001-9, §§ III & V.

The requirements in paragraphs a, b and e apply to sources located in an ozone non-attainment area or the Denver 1-hour ozone attainment/maintenance area. The requirements in paragraphs c and d apply statewide.

- a. All storage tank gauging devices, anti-rotation devices, accesses, seals, hatches, roof drainage systems, support structures, and pressure relief valves shall be maintained and operated to prevent detectable vapor loss except when opened, actuated, or used for necessary and proper activities (e.g. maintenance). Such opening, actuation, or use shall be limited so as to minimize vapor loss.
  - Detectable vapor loss shall be determined visually, by touch, by presence of odor, or using a portable hydrocarbon analyzer. When an analyzer is used, detectable vapor loss means a VOC concentration exceeding 10,000 ppm. Testing shall be conducted as in Regulation No. 7, Section VIII.C.3.
- b. Except when otherwise provided by Regulation No. 7, all volatile organic compounds, excluding petroleum liquids, transferred to any tank, container, or vehicle compartment with a capacity exceeding 212 liters (56 gallons), shall be transferred using submerged or bottom filling equipment. For top loading, the fill tube shall reach within six inches of the bottom of the tank compartment. For bottom-fill operations, the inlet shall be flush with the tank bottom.
- c. The permittee shall not dispose of volatile organic compounds by evaporation or spillage unless Reasonably Available Control Technology (RACT) is utilized.
- d. No owner or operator of a bulk gasoline terminal, bulk gasoline plant, or gasoline dispensing facility as defined in Colorado Regulation No. 7, Section VI, shall permit gasoline to be intentionally spilled, discarded in sewers, stored in open containers, or disposed of in any other manner that would result in evaporation.
- e. Beer production and associated beer container storage and transfer operations involving volatile organic compounds with a true vapor pressure of less than 1.5 PSIA actual conditions are exempt from the provisions of paragraph b, above.

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# 30. Wood Stoves and Wood burning Appliances

Regulation No. 4, 5 CCR 1001-6

The permittee shall comply with the provisions of Regulation No. 4 concerning the advertisement, sale, installation, and use of wood stoves and wood burning appliances.

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# **OPERATING PERMIT APPENDICES**

- A INSPECTION INFORMATION
- **B-MONITORING AND PERMIT DEVIATION REPORT**
- C COMPLIANCE CERTIFICATION REPORT
- D NOTIFICATION ADDRESSES
- **E PERMIT ACRONYMS**
- F PERMIT MODIFICATIONS

# \*DISCLAIMER:

None of the information found in these Appendices shall be considered to be State or Federally enforceable, except as otherwise provided in the permit, and is presented to assist the source, permitting authority, inspectors, and citizens.

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## **APPENDIX A - Inspection Information**

#### **Directions to Plant**

The facility is located at 1500 S Clayton Street. The facility is located on a 90 acre industrial area shared with the greenhouse and is just south of Brush.

### **Safety Equipment Required**

Eye Protection, Hard Hat, Safety Shoes and Hearing Protection.

## **Facility Plot Plan**

Figure 1 (following page) shows the plot plan as submitted on August 27, 2004 with the source's comments on the draft renewal Title V Operating Permit for Brush Cogeneration Partners (96OPMR153).

# **List of Insignificant Activities**

The following list of insignificant activities was provided by the source to assist in the understanding of the facility layout. Since there is no requirement to update such a list, activities may have changed since the last filing.

Insignificant activities and/or sources of emissions as submitted in the application are as follows:

One (1) small water treatment analysis labs

One (1) water treatment chemical storage and dispensing tank @ 325 gallons, one (1) @ 100 gallons and one (1) at 75 gallons

Sulfuric acid storage tank, 3800 gallons

Two (2) small propane gas tanks

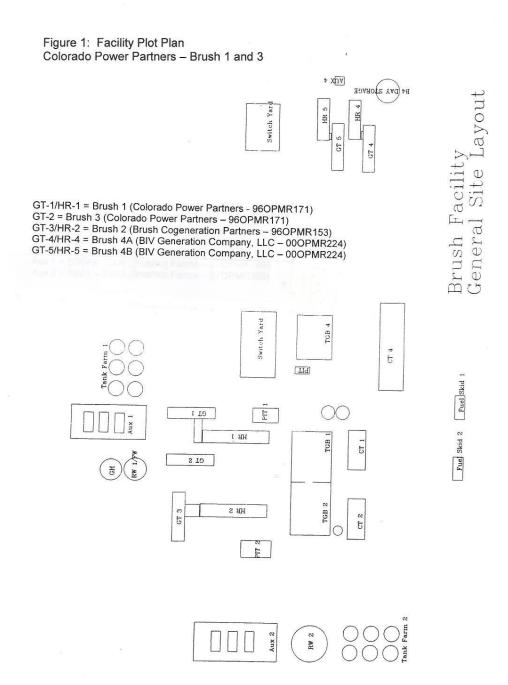
Ten (10) drums of lube oils, 55 gallons

Gas unit and duct gas heaters, five (5) @ 75 Mbtu, five (5) @ 100 Mbtu, three (3) @ 125 Mbtu and four (4) @ 150 Mbtu

One (1) portable welding unit (driven by a 20 hp gasoline fired engine)

One (1) portable power generator (driven by a 112 hp natural gas fired engine)

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#### APPENDIX B

# **Reporting Requirements and Definitions**

with codes ver 2/20/07

Please note that, pursuant to 113(c)(2) of the federal Clean Air Act, any person who knowingly:

- (A) makes any false material statement, representation, or certification in, or omits material information from, or knowingly alters, conceals, or fails to file or maintain any notice, application, record, report, plan, or other document required pursuant to the Act to be either filed or maintained (whether with respect to the requirements imposed by the Administrator or by a State);
- (B) fails to notify or report as required under the Act; or
- (C) falsifies, tampers with, renders inaccurate, or fails to install any monitoring device or method required to be maintained or followed under the Act shall, upon conviction, be punished by a fine pursuant to title 18 of the United States Code, or by imprisonment for not more than 2 years, or both. If a conviction of any person under this paragraph is for a violation committed after a first conviction of such person under this paragraph, the maximum punishment shall be doubled with respect to both the fine and imprisonment.

The permittee must comply with all conditions of this operating permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

The Part 70 Operating Permit program requires three types of reports to be filed for all permits. All required reports must be certified by a responsible official.

### **Report #1: Monitoring Deviation Report** (due at least every six months)

For purposes of this operating permit, the Division is requiring that the monitoring reports are due every six months unless otherwise noted in the permit. All instances of deviations from permit monitoring requirements must be clearly identified in such reports.

For purposes of this operating permit, monitoring means any condition determined by observation, by data from any monitoring protocol, or by any other monitoring which is required by the permit as well as the recordkeeping associated with that monitoring. This would include, for example, fuel use or process rate monitoring, fuel analyses, and operational or control device parameter monitoring.

# Report #2: Permit Deviation Report (must be reported "promptly")

In addition to the monitoring requirements set forth in the permits as discussed above, each and every requirement of the permit is subject to deviation reporting. The reports must address deviations from permit requirements, including those attributable to malfunctions as defined in this Appendix, the probable cause of

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such deviations, and any corrective actions or preventive measures taken. All deviations from any term or condition of the permit are required to be summarized or referenced in the annual compliance certification.

For purposes of this operating permit, "malfunction" shall refer to both emergency conditions and malfunctions. Additional discussion on these conditions is provided later in this Appendix.

For purposes of this operating permit, the Division is requiring that the permit deviation reports are due as set forth in General Condition 21. Where the underlying applicable requirement contains a definition of prompt or otherwise specifies a time frame for reporting deviations, that definition or time frame shall govern. For example, quarterly Excess Emission Reports required by an NSPS or Regulation No. 1, Section IV.

In addition to the monitoring deviations discussed above, included in the meaning of deviation for the purposes of this operating permit are any of the following:

- (1) A situation where emissions exceed an emission limitation or standard contained in the permit;
- (2) A situation where process or control device parameter values demonstrate that an emission limitation or standard contained in the permit has not been met;
- (3) A situation in which observations or data collected demonstrates noncompliance with an emission limitation or standard or any work practice or operating condition required by the permit; or,
- (4) A situation in which an excursion or exceedance as defined in 40CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred. (only if the emission point is subject to CAM)

For reporting purposes, the Division has combined the Monitoring Deviation Report with the Permit Deviation Report. All deviations shall be reported using the following codes:

1 = Standard: When the requirement is an emission limit or standard 2 = Process: When the requirement is a production/process limit

3 = Monitor: When the requirement is monitoring 4 = Test: When the requirement is testing

5 = Maintenance: When required maintenance is not performed
 6 = Record: When the requirement is recordkeeping
 7 = Report: When the requirement is reporting

**8 = CAM:** A situation in which an excursion or exceedance as defined in 40CFR Part 64 (the

Compliance Assurance Monitoring (CAM) Rule) has occurred.

**9 = Other:** When the deviation is not covered by any of the above categories

# **Report #3: Compliance Certification (annually, as defined in the permit)**

Submission of compliance certifications with terms and conditions in the permit, including emission limitations, standards, or work practices, is required not less than annually.

Compliance Certifications are intended to state the compliance status of each requirement of the permit over the certification period. They must be based, at a minimum, on the testing and monitoring methods specified in the

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permit that were conducted during the relevant time period. In addition, if the owner or operator knows of other material information (i.e. information beyond required monitoring that has been specifically assessed in relation to how the information potentially affects compliance status), that information must be identified and addressed in the compliance certification. The compliance certification must include the following:

- The identification of each term or condition of the permit that is the basis of the certification;
- Whether or not the method(s) used by the owner or operator for determining the compliance status with each permit term and condition during the certification period was the method(s) specified in the permit. Such methods and other means shall include, at a minimum, the methods and means required in the permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Clean Air Act, which prohibits knowingly making a false certification or omitting material information;
- The status of compliance with the terms and conditions of the permit, and whether compliance was continuous or intermittent. The certification shall identify each deviation and take it into account in the compliance certification. Note that not all deviations are considered violations.
- Such other facts as the Division may require, consistent with the applicable requirements to which the source is subject, to determine the compliance status of the source.

The Certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred. (only for emission points subject to CAM)

Note the requirement that the certification shall identify each deviation and take it into account in the compliance certification. Previously submitted deviation reports, including the deviation report submitted at the time of the annual certification, may be referenced in the compliance certification.

### Startup, Shutdown, Malfunctions and Emergencies

Understanding the application of Startup, Shutdown, Malfunctions and Emergency Provisions, is very important in both the deviation reports and the annual compliance certifications.

### Startup, Shutdown, and Malfunctions

Please note that exceedances of some New Source Performance Standards (NSPS) and Maximum Achievable Control Technology (MACT) standards that occur during Startup, Shutdown or Malfunctions may not be considered to be non-compliance since emission limits or standards often do not apply unless specifically stated in the NSPS. Such exceedances must, however, be reported as excess emissions per the NSPS/MACT rules and would still be noted in the deviation report. In regard to compliance certifications, the permittee should be

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<sup>&</sup>lt;sup>1</sup> For example, given the various emissions limitations and monitoring requirements to which a source may be subject, a deviation from one requirement may not be a deviation under another requirement which recognizes an exception and/or special circumstances relating to that same event.

confident of the information related to those deviations when making compliance determinations since they are subject to Division review. The concepts of Startup, Shutdown and Malfunctions also exist for Best Available Control Technology (BACT) sources, but are not applied in the same fashion as for NSPS and MACT sources.

### **Emergency Provisions**

Under the Emergency provisions of Part 70 certain operational conditions may act as an affirmative defense against enforcement action if they are properly reported.

### **DEFINITIONS**

**Malfunction** (NSPS) means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

**Malfunction** (SIP) means any sudden and unavoidable failure of air pollution control equipment or process equipment or unintended failure of a process to operate in a normal or usual manner. Failures that are primarily caused by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.

**Emergency** means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

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# Monitoring and Permit Deviation Report - Part I

- 1. Following is the **required** format for the Monitoring and Permit Deviation report to be submitted to the Division as set forth in General Condition 21. The Table below must be completed for all equipment or processes for which specific Operating Permit terms exist.
- 2. Part II of this Appendix B shows the format and information the Division will require for describing periods of monitoring and permit deviations, or malfunction or emergency conditions as indicated in the Table below. One Part II Form must be completed for each Deviation. Previously submitted reports (e.g. EER's or malfunctions) may be referenced and the form need not be filled out in its entirety.

FACILITY NAME: Colorado Power Partner	S
OPERATING PERMIT NO: 960PMR171	
REPORTING PERIOD:	

Operating Permit Unit		Devia Noted I Perio	During	Deviation Code <sup>2</sup>	/Eme	unction orgency n Reported g Period?
ID	Unit Description	YES	NO		YES	NO
GT-1	Brush 1: One Westinghouse 251AA Natural Gas Fired Combustion Turbine, Rated at 420 mmBtu/hr, SN: 17A-2142, Equipped with HRSG and One (1) Natural Gas Fired Duct Burner, Rated at 180 mmBtu/hr.					
GT-2	Brush 3: One Westinghouse 251AA Natural Gas Fired Combustion Turbine, Rated at 420 mmBtu/hr, SN: 17A-2144.					
	Two (2) Cummins BT171OP-635 Diesel Fired Reciprocating Starter Engines, Rated at 600 hp, SN's: 734137-3 and 735311-3.					
S005 One (1) Ecodyne Cooling Tower, Two Cell counter Flow, Rated at 25,000 gallons/min.						
	General Conditions					
	Insignificant Activities					

<sup>&</sup>lt;sup>1</sup> See previous discussion regarding what is considered to be a deviation. Determination of whether or not a deviation has occurred shall be based on a reasonable inquiry using readily available information.

<sup>2</sup>Use the following entries as appropriate:

1 = Standard: When the requirement is an emission limit or standard 2 = Process: When the requirement is a production/process limit

3 = Monitor: When the requirement is monitoring 4 = Test: When the requirement is testing

5 = Maintenance: When required maintenance is not performed
 6 = Record: When the requirement is recordkeeping
 7 = Report: When the requirement is reporting

**8 = CAM:** A situation in which an excursion or exceedance as defined in 40 CFR Part 64 (the Compliance Assurance

Monitoring (CAM) Rule) has occurred.

**9 = Other:** When the deviation is not covered by any of the above categories

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FACILITY NAME:

# **Monitoring and Permit Deviation Report - Part II**

Colorado Power Partners

OPERATING PERMIT NO: 960PMR171 REPORTING PERIOD:			
Is the deviation being claimed as an:	Emergency	_ Malfunction_	N/A
(For NSPS/MACT) Did the deviation occur during:	Startup Normal Operation	Shutdown	Malfunction
OPERATING PERMIT UNIT IDENTIFICATION:			
Operating Permit Condition Number Citation			
Explanation of Period of Deviation			
Duration (start/stop date & time)			
Action Taken to Correct the Problem			
Measures Taken to Prevent a Reoccurrence of the Prevent and Preven	<u>roblem</u>		
Dates of Malfunctions/Emergencies Reported (if app	plicable)		
Deviation Code	Division Code QA:		
SEE EXAMPLI	E ON THE NEXT I	PAGE	

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Acme Corp.

FACILITY NAME:

# **EXAMPLE**

OPERATING PERMIT NO: 96OPZZXXX REPORTING PERIOD: 1/1/04 - 6/30/06				
Is the deviation being claimed as an:	Emergency	Malfunction _	XX	N/A
(For NSPS/MACT) Did the deviation occur during:	Startup Normal Operation			unction
OPERATING PERMIT UNIT IDENTIFICATION:				
Asphalt Plant with a Scrubber for Particulate Contro	l - Unit XXX			
Operating Permit Condition Number Citation				
Section II, Condition 3.1 - Opacity Limitation				
Explanation of Period of Deviation				
Slurry Line Feed Plugged				
<u>Duration</u>				
START- 1730 4/10/06 END- 1800 4/10/06				
Action Taken to Correct the Problem				
Line Blown Out				
Measures Taken to Prevent Reoccurrence of the Pro	<u>blem</u>			
Replaced Line Filter				
Dates of Malfunction/Emergencies Reported (if appl	licable)			
5/30/06 to A. Einstein, APCD				
Deviation Code	Division Code QA:		-	

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# **Monitoring and Permit Deviation Report - Part III**

# REPORT CERTIFICATION

SOURCE NAME: Colorado Power Partners	
FACILITY IDENTIFICATION NUMBER: 0870	0027
PERMIT NUMBER: 96OPMR171	
REPORTING PERIOD: (see	e first page of the permit for specific reporting period and dates)
	viation Reports must be certified by a responsible official as ection I.B.38. This signed certification document must be
STATEMENT OF COMPLETENESS	
e	ted in its entirety and, based on information and belief t the statements and information contained in this submittal
1-501(6), C.R.S., makes any false material state	nat any person who knowingly, as defined in Sub-Section 18- tement, representation, or certification in this document is I in accordance with the provisions of Sub-Section 25-7
Printed or Typed Name	Title
Signature of Responsible Of	ficial Date Signed
-	the Division at the address given in Appendix D of this
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First Issued: 7/1/02 Renewed: 1/1/09 Last Revised: 10/5/11

#### **APPENDIX C**

# **Required Format for Annual Compliance Certification Report**

ver 2/20/07

Following is the format for the Compliance Certification report to be submitted to the Division and the U.S. EPA annually based on the effective date of the permit. The Table below must be completed for all equipment or processes for which specific Operating Permit terms exist.

FACILITY NAME: Colorado Power Partners

OPERATING PERMIT NO: 960PMR171 REPORTING PERIOD:

# I. Facility Status

\_\_\_\_ During the entire reporting period, this source was in compliance with **ALL** terms and conditions contained in the Permit, each term and condition of which is identified and included by this reference. The method(s) used to determine compliance is/are the method(s) specified in the Permit.

With the possible exception of the deviations identified in the table below, this source was in compliance with all terms and conditions contained in the Permit, each term and condition of which is identified and included by this reference, during the entire reporting period. The method used to determine compliance for each term and condition is the method specified in the Permit, unless otherwise indicated and described in the deviation report(s). Note that not all deviations are considered violations.

Operating Permit Unit ID	Unit Description	Deviations Reported <sup>1</sup>					toring od per nit? <sup>2</sup>		mpliance uous or ittent? <sup>3</sup>
		Previous	Current	YES	NO	Continuous	Intermittent		
GT-1	Brush 1: One Westinghouse 251AA Natural Gas Fired Combustion Turbine, Rated at 420 mmBtu/hr, SN: 17A-2142, Equipped with HRSG and One (1) Natural Gas Fired Duct Burner, Rated at 180 mmBtu/hr.								
GT-2	Brush 3: One Westinghouse 251AA Natural Gas Fired Combustion Turbine, Rated at 420 mmBtu/hr, SN: 17A-2144.								
	Two (2) Cummins BT1710P-635 Diesel Fired Reciprocating Starter Engines, Rated at 600 hp, SN's: 734137-3 and 735311-3.								
S005	One (1) Ecodyne Cooling Tower, Two Cell counter Flow, Rated at 25,000 gallons/min.								
	General Conditions								

Operating Permit Number: 96OPMR171 First Issued: 7/1/02

Operating Permit Unit ID	Unit Description	Deviations Reported <sup>1</sup>		Metho	toring od per nit? <sup>2</sup>	contin	npliance uous or ittent? <sup>3</sup>
		Previous	Current	YES	NO	Continuous	Intermittent
	Insignificant Activities <sup>4</sup>						

<sup>&</sup>lt;sup>1</sup> If deviations were noted in a previous deviation report, put an "X" under "previous". If deviations were noted in the current deviation report (i.e. for the last six months of the annual reporting period), put an "X" under "current". Mark both columns if both apply.

#### NOTE:

The Periodic Monitoring requirements of the Operating Permit program rule are intended to provide assurance that even in the absence of a continuous system of monitoring the Title V source can demonstrate whether it has operated in continuous compliance for the duration of the reporting period. Therefore, if a source 1) conducts all of the monitoring and recordkeeping required in its permit, even if such activities are done periodically and not continuously, and if 2) such monitoring and recordkeeping does not indicate non-compliance, and if 3) the Responsible Official is not aware of any credible evidence that indicates non-compliance, then the Responsible Official can certify that the emission point(s) in question were in continuous compliance during the applicable time period.

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<sup>&</sup>lt;sup>2</sup> Note whether the method(s) used to determine the compliance status with each term and condition was the method(s) specified in the permit. If it was not, mark "no" and attach additional information/explanation.

<sup>&</sup>lt;sup>3</sup> Note whether the compliance status with of each term and condition provided was continuous or intermittent. "Intermittent Compliance" can mean either that noncompliance has occurred or that the owner or operator has data sufficient to certify compliance only on an intermittent basis. Certification of intermittent compliance therefore does not necessarily mean that any noncompliance has occurred.

<sup>&</sup>lt;sup>4</sup> Compliance status for these sources shall be based on a reasonable inquiry using readily available information.

II. Status for Accidental Release Prevention Program:					
	A.	This facility is subject is not subject to Release Prevention Program (Section 112(r) of the Federal			
	B.	If subject: The facility is is not requirements of section 112(r).	in compliance with all the		
		1. A Risk Management Plan will be appropriate authority and/or the designated central l			
III.	Certif	ication			
Colora	ado Reg	on for the Annual Compliance Certification must be certified gulation No. 3, Part A, Section I.B.38. This signed certification being submitted.	•		
reaso	nable ii	wed this certification in its entirety and, based on informanquiry, I certify that the statements and information cont complete.			
C.R.S	., make	hat the Colorado Statutes state that any person who knowes any false material statement, representation, or certific r and may be punished in accordance with the provisions	ation in this document is guilty of a of § 25-7 122.1, C.R.S.		
		Printed or Typed Name	Title		
	_	Signature	Date Signed		
		compliance certifications shall be submitted to the Air Pollutional Protection Agency at the addresses listed in Appendix D or			

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#### APPENDIX D

#### **Notification Addresses**

#### 1. **Air Pollution Control Division**

Colorado Department of Public Health and Environment Air Pollution Control Division Operating Permits Unit APCD-SS-B1 4300 Cherry Creek Drive S. Denver, CO 80246-1530

**ATTN: Matt Burgett** 

# 2. United States Environmental Protection Agency

Compliance Notifications:

Office of Enforcement, Compliance and Environmental Justice Mail Code 8ENF-T U.S. Environmental Protection Agency, Region VIII 1595 Wynkoop Street Denver, CO 80202-1129

Permit Modifications, Off Permit Changes:

Office of Partnerships and Regulatory Assistance Air and Radiation Programs, 8P-AR U.S. Environmental Protection Agency, Region VIII 1595 Wynkoop Street Denver, CO 80202-1129

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# APPENDIX E

# **Permit Acronyms**

# Listed Alphabetically:

AIRS -	Aerometric Information Retrieval System
AP-42-	EPA Document Compiling Air Pollutant Emission Factors
APEN -	Air Pollution Emission Notice (State of Colorado)
APCD -	Air Pollution Control Division (State of Colorado)
ASTM -	American Society for Testing and Materials
BACT -	Best Available Control Technology
BTU -	British Thermal Unit
CAA -	Clean Air Act (CAAA = Clean Air Act Amendments)
CCR -	Colorado Code of Regulations
CEM -	Continuous Emissions Monitor
CF -	Cubic Feet (SCF = Standard Cubic Feet)
CFR -	Code of Federal Regulations
CMS -	Continuous Monitoring System
CO -	Carbon Monoxide
COM -	Continuous Opacity Monitor
CRS -	Colorado Revised Statute
EF -	Emission Factor
EPA -	Environmental Protection Agency
FI -	Fuel Input Rate in MMBtu/hr
FR -	Federal Register
G -	Grams
Gal -	Gallon
GPM -	Gallons per Minute
HAPs -	Hazardous Air Pollutants
HP -	Horsepower
HP-HR -	Horsepower Hour (G/HP-HR = Grams per Horsepower Hour)
LAER -	Lowest Achievable Emission Rate
LBS -	Pounds
M -	Thousand
MM -	Million
MMscf -	Million Standard Cubic Feet
MMscfd -	Million Standard Cubic Feet per Day
N/A or NA -	Not Applicable
NO <sub>X</sub> -	Nitrogen Oxides
NESHAP -	National Emission Standards for Hazardous Air Pollutants
NSPS -	New Source Performance Standards
P -	Process Weight Rate in Tons/Hr
DE	

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Particulate Emissions

PE -

PM<sub>10</sub> - Particulate Matter Under 10 Microns

PPM - Parts Per Million

PPMV - Parts Per Million, by Volume
PPMVD - Parts per Million, by Volume, Dry
PSD - Prevention of Significant Deterioration

PTE - Potential To Emit

RACT - Reasonably Available Control Technology

SCC - Source Classification Code

SCF - Standard Cubic Feet

SIC - Standard Industrial Classification

 $SO_2$  - Sulfur Dioxide TPY - Tons Per Year

TSP - Total Suspended Particulate VOC - Volatile Organic Compounds

# APPENDIX F

# **Permit Modifications**

DATE OF REVISION	MODIFICATION TYPE	SECTION NUMBER, CONDITION NUMBER	DESCRIPTION OF REVISION
July 15, 2009	Minor Modification	Section II, Condition 1.4	"Section II, Condition 1.13 (opacity)" was changed to "Section II, Condition 1.14 (opacity)".
		Section II.1	Added a "new" condition 1.10 to determine the Btu content of the natural gas. Other conditions following "new" condition 1.10 were re-numbered as appropriate. Revised Condition 1.2.1 to remove the emission factor source information (language in parenthesis) and include it in columns in the emission factor table. Condition 1.2.1 was also revised to base emission estimates on fuel consumption and the heat content of the fuel for the turbines and duct burner(per "new" condition 1.10), rather than heat input and language indicating that the monthly heat input would be determined from the CEMS DAHS has been removed. Condition 1.3.1 was revised to remove the language regarding the monthly heat input to Brush 1 and replace it with references to the fuel consumption rate and the heat content of the natural gas.
October 5, 2011	Minor Modification	Section I	Condition 1.1 was revised to indicate that the greenhouse is considered a separate source from the Brush Cogeneration Facility. Revised Condition 3.2 to remove permit 07OPMR299 from the list, since the greenhouse is now considered a separate source.
		Section II, Condition 1.10	Revised the language in this condition to allow the Btu content to be determined using an in-line gas chromatograph. In addition, the language regarding relying on vendor analyses was removed since this option isn't used.
		Section III	Change the alternate designated representative.
		Section V	Added a version date. The title for Condition 6 was changed from "Emission Standards for Asbestos" to "Emission Controls for Asbestos" and in the text the phrase "emission standards for asbestos" was change to "asbestos control". Condition 29 (VOC) was revised primarily to add the provisions in Reg 7, Section III.C as paragraph e although other minor language and format changes were made.
		Appendix D	Changed the Division contact for reports

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